THE
JOURNAL OF BUSINESS
of the University of Chicago

VOLUME VIII JANUARY 1935 NUMBER 1

RETAILING UNDER THE N.R.A. I[1]

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A MORE or less complete examination of retailing under the N.R.A. should include: (1) an analysis of all retail codes; (2) an analysis of the possible effects of producer and wholesale codes on retailing. Owing to the inadequacy of data, such a widespread analysis would be almost impossible. Hence this article will center on the Retail Code, and other retail codes and manufacturer and wholesaler codes will be discussed only in their relation to this code. The Retail Code is perhaps the most important of the retail codes, and it is not improbable that subsequent progress of code simplification will work toward a Master Retail Code based on this code.

The following codes stand out as representative of the retail trade: Retail, Drugs, Jewelry, Food and Grocery, Agricultural Implement, Tire and Battery, and Tobacco. One generally thinks of optical goods, oil-burners, petroleum products, ice, lumber, monuments, and motor vehicles in a slightly different category.

In sphere of control the Retail Code is most important. Designed to govern the retail trade, this code was sponsored by

National Association of Retail Clothiers and Furnishers
National Retail Dry Goods Association

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National Retail Furniture Association
National Retail Hardware Association
Limited Price Variety Stores Association, Inc.
Mail Order Association of America
National Association of Music Merchants
National Council of Shoe Retailers, Inc.
National Shoe Retailers Association

Drugs and books are listed as supplements to this code.

I. THE DEVELOPMENT OF THE RETAIL CODE

The National Industrial Recovery program as first conceived gave little attention to retail distribution. The prosperity of the ten or twelve so-called basic industries was held to be the key to industrial recovery. Retailing, with its numerous and scattered units, could contribute to recovery only in terms of the progress of other trades and industries. Many students of retailing saw in the N.I.R.A. merely an opportunity for the further development of the retail-trade association. In the words of one retail expert, "Retailing must, of course, show the right spirit and go along with the program, but one can expect little in the way of re-employment in retailing." Meantime, other retailers were thinking in terms of an opportunity to eliminate certain forms of price-cutting and unfair trade practices. The N.R.A., during the first year of its activity, did nothing to create a distribution division, although several within its ranks were arguing for the necessity of such a division.

When the public relations aspect of N.R.A. began to assert itself, the importance of retailing bulked large. From the standpoint of a great mass of consumers, retailers are, in a very literal sense, the sellers of N.R.A. to the United States. When it came time to consider the distribution of code eagles, those in authority realized more than ever before the strategic position of retailing.

A compilation of the Trade Association Division of the United States Department of Commerce in the spring of 1934 revealed that approximately 75 per cent of N.R.A.'s task was embraced in only 36 of the more than 350 codes approved at that time. Of these 36 codes, the Retail Code (sometimes referred to as the Master Retail or General Retail Code) accounted for 21 per cent

of the 75 per cent of N.R.A.'s task. Three other retail codes—namely, Food and Groceries, Lumber, and Solid Fuel—were included in this list of the 36 most important codes. Retail codes represent a number of small interests, and the Retail Code embraces over 700,000 employers.

Retailing had made a rather definite contribution to the Recovery Program under the President's Re-employment Agreement. The Division of Research and Planning of N.R.A. prepared retail employment and pay-roll figures comparing June, 1933, with October, 1933.

Under the P.R.A. employment gains ranged from 11.8 per cent in the cigar and drug trade to 21.9 per cent in "other general merchandise" stores. Pay-roll gains ranged from 15.2 per cent in "other retail" stores to 45.2 per cent in variety (five-and-ten-cent) stores. Automotive retailers with a wage-payment gain of 27.7 per cent and apparel retailers with a wage-payment gain of 37.9 per cent are among the trades that showed marked increases in wage payments.

Preliminary conferences.—The National Retail Dry Goods Association was in convention at the time the N.I.R.A. went into action. Keenly interested in the problems of the retail trade, this Association entered into a discussion of a code for the dry-goods trade. In July, 1933, conferences were held with other retail-trade groups and a so-called code for the retail trade was subsequently drawn up.

During the month of July, 1933, representatives of retail-trade associations met frequently to discuss and to revise the Retail Code. Clashes between large-scale and small-scale retailers centered around wage and hour provisions. The hardware group took the lead in championing the cause of the small merchant. The southern wage differential was hotly contested and discussed. The selling-below-cost provision did not at the outset stand out as a leading issue, but by the close of the public hearing it appeared to be the most controversial provision of the code.

Numerous conferences were held with N.R.A. officials in Washington. Wage and hour provisions bulked large at these conferences. At one meeting a retail expert retained by a group of limited-

price chain stores argued that because of the efficiency developed by that type of retail organization, salesmanship was little needed and that, therefore, the selling employees should receive a low wage. To this argument General Johnson replied, "Any type of efficiency based on exploitation has no place in the recovery program."

Public hearing.—The public hearing on the Retail Code was one of the largest of all N.R.A. hearings. General Johnson and Donald Richberg opened the hearing and A. D. Whiteside presided. Aside from the "color," more or less artificially created, the hearing was of little consequence. Private conferences during the hearing and a number of post-hearing conferences developed the Retail Code as finally approved. One of these post-hearing conferences was conducted by President Roosevelt.

Witnesses at N.R.A. public hearings are heard in the order of the provisions of the code. Consequently, testimony on the wage and hour provisions occupied the early part of the hearing. The Retail Code as submitted provided a forty-hour work week. An amendment was offered at the hearing asking for a forty-four-hour work week.

In support of this amendment it was contended that a forty-four-hour work week would bring retail employment to the 1929 level. Figures gathered from the principal trades sponsoring the code were presented.

Table I shows the lines of business included and the total number of persons working in each of those lines, as well as the net sales. Mail-order and department-store establishments have been consolidated into the dry-goods group. Proprietors and firm members and the employees, full-time and part-time, are included.

In addition to the retail census figures (Table I), the Retail Code Committee secured data from 2,200 stores (Table II), comparing employment of 1933 with that of 1929.

The employees numbered 224,140 full-time and 17,486 part-time for 1929. By 1933 these had decreased to 197,065 full-time; the part-time had risen to 25,360. Combining the full-time and part-time, by considering four of the latter equal to one of the

TABLE I*

RETAIL STATISTICS FOR 1929

KIND OF BUSINESS	NO. STORES	PROPRIETORS AND FIRM MEMBERS	EMPLOYEES		NET SALES
			Full-Time	Part-Time	
Furniture	21,563	20,936	113,445	6,432	$1,406,652,237
Hardware	25,330	27,692	48,709	6,274	706,052,831
Clothiers	28,197	26,354	67,361	17,908	1,192,722,773
Dry goods	47,893	43,826	600,853	91,623	5,653,882,468
Shoe stores	24,259	18,408	48,816	17,795	806,828,989
Total	147,242	137,216	879,184	140,032	$9,766,139,298

* From *Census of Retail Distribution*, Table 1-A.

TABLE II

STATEMENT SHOWING RESULTS OF SAMPLES OF EMPLOYMENT AS OF WEEK ENDING NEAREST TO JULY 1, 1929, AND CORRESPONDING WEEK, 1933 (EXCEPT HARDWARE)

KIND OF BUSINESS	NO. STORES	EMPLOYEES, 1929		
		Full-Time	Part-Time	Combined
Furniture	149	12,891	334	12,974
Hardware	890	Detail figures unavailable		
Clothing	87	3,669	184	3,715
Dry goods	1,000	205,236	16,697	209,410
Shoe stores	90	2,344	271	2,412
Total	2,216	224,140	17,486	228,511

KIND OF BUSINESS	EMPLOYEES, 1933			DECREASE	
	Full-Time	Part-Time	Combined	No.	Per Cent
Furniture	9,835	435	9,948	3,026	23.40
Hardware	Detail figures unavailable				4.26
Clothing	2,893	165	3,024	691	18.70
Dry goods	182,590	24,520	188,720	20,690	9.88
Shoe stores	1,657	222	1,712	700	29.10
Total	197,065	25,360	203,404	25,107	10.99

former, the decline was from 228,511 in 1929 to 203,404 in 1933. Bearing upon the adequacy of this sample, it is significant that these employees for 1929 are more than one-fourth of all the employees reported for these lines by the *Census of Retail Distribution* in 1929.

The flat percentage of decline in number of employees of these 2,200 stores was 10.99 per cent. When the rate of decline for each group was weighted according to the number of employees reported for that group in the *Census of Distribution*, the result showed a weighted average decline of 13.10 per cent.

Each store of this sample reported its trading hours per week. The weighted trading hours for the entire group came to 55.05 per week. In arriving at the working hours for employees, allowance was made for the time out for lunch, and the extra time which is represented by the required or customary presence of the employees before the opening of the store and after its closing was added. Taking these facts into consideration, it was concluded that the average working hours amounted to 52.05 per week.

A reduction of 13.10 per cent in the 52.05 work hours would result in a work week of 45.23 hours. This would absorb a sufficient number of employees to bring the total for these firms back to the level of 1929. A forty-four-hour week for selling employees and a forty-eight-hour week for non-selling employees would more than accomplish this. It was argued that "the number of employees could be increased by 150,000 through this reduction in hours, while their decline since 1929 has amounted to only 137,000."

The hearing continued for several days—many witnesses speaking on the various sections of the proposed code. Dr. Paul H. Nystrom, representing the variety stores, made a contribution to the hearing by presenting a new code providing for an optional work week with an attendant increase or decrease in store hours. The change proposed by Dr. Nystrom was as follows:

> *a*) On and after the effective date of this Code, no employee of any retail company shall be worked more than 40 hours per week, except as follows: (1) In stores which are open for business not less than 52 hours nor more than 60 hours per week, employees may be worked not more than 44 hours per week; (2) In stores which are open for business more than 60 hours per week, employees may be worked not more than 48 hours per week.

As will be shown in a later section, this plan of work week and store hours was extended and included in the approved code.

Major B. H. Namm of the Namm store in Brooklyn and Percy Strauss of R. H. Macy Company, New York City, discussed the pros and cons of the selling-below-cost provision.[3] Mr. Strauss, arguing against the provision, cited the advantages of full and free competition, the differences in retail-store efficiency, and the right of the consumer to share in these differentials through lower prices. Major Namm stated that he was opposed to predatory price-cutting and that labor needed the protection afforded by the elimination of this evil.

The argument for price-fixing was centered against the stop-loss provision. This provision was held to savor of the retailer asking the government to fix prices for his benefit at the expense of the consumer in order to remove competition of the more efficient retailer. Such a provision, it was further argued, would have the effect of increasing price-cutting at the base.

In arguing for this provision in its original form with the 10 per cent labor cost mark-up, it was held that uncontrolled price-cutting must be checked in order to foster continued re-employment and the payment of higher wages.

The 10 per cent mark-up over net invoice delivered cost or current market delivered cost, whichever is lower, furnishes a reasonable measure of protection to both industry and the consumer. The 10 per cent minimal mark-up is so designed as to obviate the necessity of making exceptions in favor of the retailers who claim special dispensation on account of their exceptional marketing methods. Further, the nature of retail costs and mark-up is not clearly understood by all opponents of this provision. The provision is not essentially a price-fixing provision, but merely sets a floor below which prices may not go, and thus protects against cutthroat price competition on "bait" articles of merchandise. Since cost of goods to individual stores is the base, the subsequent mark-up percentage would not make for price uniformity at this base.

[3] No individual or organization selling goods at retail shall sell or offer for sale any merchandise at less than the net invoice delivered cost or current-market delivered cost, whichever is lower, plus 10 per cent to insure that labor costs shall be at least partially covered.

Other witnesses stated that drug stores should be brought under this code because they were engaged in a general merchandise business. A number of witnesses were inarticulate in their statements concerning the small store. On the whole, one might guess that they were opposed to the sponsorship of the code. On the other hand, the so-called small or family store was a thorn in the flesh to many large and medium-sized store-owners. Frequently dubbed "Mama, Papa, and Rosy stores," it was pointed out that these stores remain open all hours of the day and night—pay no wages—and that the owner generally makes his home above or in the rear of the store. Such a scheme throws the burden of higher wages and fair trade practices on the larger stores. It would be quite difficult to police these small stores, especially those of the family type.

None of the advisory boards played an important part in the hearing. Many were disappointed that the Consumers Board did not assume more responsibility at the hearing. This was the first code which affected the great mass of consumers.

Post-hearing developments.—The hearing recessed, in N.R.A. terms, although the recess amounted to an adjournment. Then followed a series of conferences. Finally, a code resembling in most aspects the code which was later approved was sent to the administrator. The administrator in turn submitted the code to the President, pointing out the need for the loss-limitation provision and other trade practices affecting selling, pricing, and advertising. It was the opinion of the administrator that the working hours represented a substantial reduction and that this reduction would restore employment in retailing to the 1929 level. The Retail Drug Code was submitted at the same time as Schedule A of the Retail Code.

The Labor Advisory Board admitted lack of adequate data upon which to judge the merits of this code. Supported by the Secretary of Labor, the code was criticized for its setting-up of separate categories for junior employees and apprentices, as by this classification the minima provided for this industry are greatly reduced. The Labor Board also objected to the fifty-six-hour week proposed for drug clerks and the sixty-two-hour week for pharmacists, with allowances of only one day of rest in two weeks.

The Consumers' Advisory Board was direct in its opposition to the Retail Code. It opposed the stop-loss provisions on the following grounds: (1) because they are unworkable in the light of the exceptions provided; (2) because they set a precedent for limiting losses in the retail trade without the grant of any compensating privileges to the public; (3) because they constitute a step in the direction of subsidizing inefficiency in the retail trade; and (4) because, if adopted at this time, they will invite consumer reactions dangerous to the success of the National Recovery Administration.

Opposition was also centered against the provision that "no retailer shall use advertising which lays claim to a policy of generally underselling competition." This provision makes it an offense to tell the truth and resembles the ancient and now discredited doctrine that "the greater the truth the greater the libel."

The Industrial Advisory Board and the legal division of N.R.A. approved the code. Research and planning indorsed the code although it made certain reservations concerning the wage and hour provisions. The Retail Code was approved by the President on October 21, 1933, and became effective on October 30, 1933. A review of the major provisions of this code presents some view of the direction of retailing under the N.R.A.

II. RETAIL-CODE PROVISIONS

Wages and hours.—The Retail Code as submitted and amended August 14, 1933, called for a forty-four-hour week for selling employees and forty-eight hours per week for non-selling employees. Retail stores in towns of less than ten thousand (when such towns are not part of a larger trade area) were to have a forty-eight-hour week for all employees.

The wage rates were based on population differentials and ranged from twelve dollars per week to fourteen dollars per week. A southern differential of one dollar was established. (This differential appears in the approved code.) These were the skeleton provisions. There were, of course, sections dealing with collective bargaining, child labor, juniors, apprentices, executive exemptions, etc.

As approved, the major labor provisions of the code were as shown in Table III.

The exceptions to maximum periods of labor took into consideration professional persons, outside salesmen, outside collectors, watchmen, guards, store detectives, maintenance and outside-service employees, and executives. Briefly, (1) professional persons, outside salesmen, outside collectors, watchmen, guards, and

TABLE III

Store Remains Open	Employees Shall Not Work More Than
GROUP A	
Not less than 52 hours (If less than 52 hours prior to June 1, 1933, hours should not be further reduced.) Less than 56 hours	40 hours per week 8 hours per day* 6 days per week
GROUP B	
Not less than 56 hours Less than 63 hours	44 hours per week 9 hours per day* 6 days per week
GROUP C	
63 hours or more per week	48 hours per week 10 hours per day* 6 days per week

* See Art. V, sec. 7, for provision allowing employees to work one hour in excess of daily maximum prescribed above, on one day per week.

store detectives are not subject to maximum hours, and there is no limit as to the number of such employees thus exempted in any store; (2) maintenance and outside-service employees (if they are paid time and one-third for all time over six hours per week in excess of the basic period), executives (if they are paid the minimum salary), and proprietors and their immediate families are not subject to maximum hours, provided that the total number of excepted workers in these classes shall not exceed the ratio of 1 to 5.

At Christmas, inventory, or other peak times, for not over two weeks in the first six months of the calendar year or over three weeks in the last six months, employees may work in excess of the normal hours, and without requirement as to overtime pay.

Maintenance and outside-service employees are not included in the foregoing exception for peak periods.

In all instances the hours of work are to be consecutive. The minimum wage provisions are summarized in Table IV.

TABLE IV

MINIMUM-WAGE PROVISIONS: RETAIL CODE

Population of City in Which Store Is Located	Employee Hours per Week	Minimum Rate of Pay per Week	
		In the North	In the South
a) 500,000 or more	40	$14.00	$13.00
	44	14.50	13.50
	48	15.00	14.00
b) 100,000–500,000	40	13.00	12.00
	44	13.50	12.50
	48	14.00	13.00
c) 25,000–100,000	40	12.00	11.00
	44	12.50	11.50
	48	13.00	12.00
d) 2,500–25,000	40–48	The wages of all classes of employees existing on June 1, 1933, shall be increased by not less than 20 per cent, provided that this shall not require an increase in wages to more than rate of $11 per week in the North or $10 per week in the South, and provided, further, that no employee shall be paid less than at the rate of $10 per week in the North and $9 per week in the South.	
e) Less than 2,500*	40–48	The wages of all classes of employees existing on June 1, 1933, shall be increased by not less than 20 per cent, provided that this shall not require an increase in wages to more than the rate of $10 per week in the North and $9 per week in the South.	

* For exceptions to application of code to these towns, as provided in executive order of October 23, 1933, see p. 19.

Junior and apprentice employees may be paid at the rate of one dollar less per week than the minimum wages otherwise applicable.

The number of employees in any store who may be classified as junior employees and apprentice employees, taken together, shall not exceed the ratio of 1 to 5.

It is difficult to compare the wage and hour provisions of the

Retail Code with the wage and hour provisions of other retail codes. Costs of doing business, nature of service rendered, and prevailing practices all combine to make any comparison difficult. However, few outstanding differences are noted.

The Retail Food and Grocery Code provides for a forty-eight-hour work week with a wage-rate differential based on population groupings. The Retail Jewelry Code is practically the same as the Retail Code. The jewelers, however, succeeded in securing a provision which would enable a salesperson to complete a transaction. This may have the effect of increasing work hours for employees. The wage and hour provisions in the Retail Farm Equipment Code are in general the same as those of the Retail Code. The Retail Rubber Tire and Battery Code as approved resembles the Grocery Code. The Retail Tobacco Code provides for slightly higher wages than the Retail Code and also makes possible a fifty-six-hour work week with a dollar per week increase in wages over the forty-eight-hour work week. The various retail codes differ as to exceptions. These, for the most part, are governed by the nature of the business.

Fundamental to the success of the N.I.R.A. is re-employment. It has been shown that retailing made a substantial contribution to recovery under the P.R.A. To what extent has the employment in retail distribution increased since the approval of the various retail codes?

In answering this question an analysis of changes in retail trade (1929–33) may prove helpful (Table V).

The decline in the value of retail sales represents both fewer goods sold and lower prices. In the absence of any authoritative general index of retail prices, the influence of the price factor cannot be computed with any degree of precision.

As shown in Table V, the number of full-time workers decreased by nearly three-tenths, while part-time workers and active proprietors increased in number. It would seem likely that, with the shrinkage of business, some of the full-time workers were transferred to the part-time pay-roll, and that an increasing number of owners found that they had to take a hand personally in the work of the stores. It is obvious that, apart from any salary

changes, a shifting to the unpaid labor of the owner and to smaller pay for part-time work would produce a considerable reduction in the pay-roll. In fact, the total pay-roll declined only a little less than the value of sales. There was involved in this change a decrease of 24.4 per cent in the rate of pay for full-time employees.

In retail trade, part-time employees play a large rôle. On the average of the year 1933 they formed over 21 per cent of all paid

TABLE V*

CHANGES IN RETAIL TRADE, 1929–33

ITEM	PER CENT	
	Increase	Decrease
Number of stores		1.5
Sales		47.7
Full-time employees		29.8
Part-time employees	8.0	
All employees		24.1
Active proprietors	4.1	
Total retail workers		17.0
Pay-rolls, full-time employees		46.9
Pay-rolls, part-time employees	56.6	
Pay-rolls, all employees		43.7
Annual average pay-roll per full-time employee		24.4

* *National Industrial Conference Board Bulletin*, Vol. VIII, No. 9.

workers, and at the peak of their employment in December the proportion rose above 23 per cent. They absorbed about 8.6 per cent of the total pay-roll.

There are variations in employment in retail trade from month to month. The range of full-time employment in 1933 was from 2,481,167 in February to 3,002,255 in December, that of part-time employment from 617,069 in January to 932,983 in December. Expressed as percentages of the yearly average, full-time employment varied from 92 to 112 per cent while part-time employment varied from 84 to 128 per cent. A comparison of full-time and part-time employment combined with the previous enumeration is as shown in Table VI. This table compares the employ-

ment indexes derived from the census and those computed by the United States Bureau of Labor Statistics.

The trend shown in 1933 by the establishments and stores reporting to the United States Bureau of Labor Statistics conforms closely to that derived from the comprehensive figures of the census. This gives support to the Bureau's figures for the first half of 1934. The first six months of the year are notably higher than the corresponding period of 1933 and are only slightly less than the second half of the year.

TABLE VI*

RETAIL TRADE: INDEXES OF EMPLOYMENT
(Base: Average of 1933 = 100)

PERIOD	RETAIL TRADE	
	Census	Bureau of Labor Statistics
1933, January–June	93.8	92.9
1933, July–December	106.2	107.2
1934, January–June	.....	106.2

* Adapted from *National Industrial Conference Board Bulletin*, Vol. VIII, No. 9.

The Research and Planning Division of N.R.A. has compiled indexes of employment and pay-rolls for certain branches of the retail trade.[4] These are contained in Table VII. October, 1933, is the base. Owing to the fact that the fall pick-up started in October, this is a somewhat higher base than the average for twelve months would have been. Therefore, the fact that March levels compare so favorably with October indicates a very steady condition in these trades, notwithstanding the seasonal gains in March. It was not possible in this study to segregate part-time and full-time employees. This causes a differential between the indexes of employment and pay-rolls, particularly in January. For example, employment in variety and five-and-ten-cent stores dropped from 150.6 per cent in December to 82 per cent in January; pay-rolls declined from 129.4 to 87.6 per cent. Undoubtedly,

[4] These indexes have not been brought up to date. They do, however, indicate a trend and are helpful in analyzing employment and pay-rolls by kind of retail trade.

TABLE VII

EMPLOYMENT AND PAY-ROLLS IN SPECIFIC RETAIL TRADES

(October, 1933 = 100 per cent)

MONTH	DEPARTMENT STORES		DRUG STORES		DRY-GOODS STORES		WOMEN'S READY-TO-WEAR STORES		MEN AND BOYS' CLOTHING STORES		FURNITURE STORES		SHOES		VARIETY AND 5-AND-10-CENT STORES		HOUSEHOLD FURNISHINGS	
	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll	Employment	Pay-Roll
October	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
November	103.4	101.2	100.0	98.3	100.6	99.4	101.4	100.5	103.0	103.3	104.6	103.4	98.2	99.8	106.3	98.6	100.0	100.8
December	124.2	141.8	100.0	103.2	112.9	106.8	107.8	101.1	117.8	113.1	105.1	105.0	102.3	103.5	150.6	129.4	100.3	101.2
January	92.3	112.8	98.0	95.2	91.0	97.7	93.2	88.4	100.5	99.9	92.0	85.5	89.5	97.0	82.0	87.6	102.1	100.9
February	90.7	108.1	98.9	95.9	90.9	97.2	91.1	88.9	103.8	98.0	97.5	93.8	88.2	93.7	90.0	85.2	96.2	93.7
March	97.4	114.3	99.7	96.6	92.6	94.9	102.2	98.8	108.7	106.1	96.5	97.3	98.9	94.3	96.3	90.4	93.3	96.1

the large number of part-time employees in five-and-ten-cent stores in December causes this seeming inconsistency.

Several retail-trade associations presented figures to the N.R.A. which indicate increases in pay-rolls and employment since the Retail Code went into effect. These are given in Table VIII. The pay-roll figures include executive salaries, which have not been

TABLE VIII*

EMPLOYMENT AND PAY-ROLLS IN RETAIL TRADE

RETAIL TRADE	EMPLOYMENT		PAY-ROLLS	
	Per Cent Increase	Period	Per Cent Increase	Period
National Retail Dry Goods Association....	13.0	Jan., 1933–Jan., 1934	15.0	Jan., 1933—Jan., 1934
National Retail Hardware Association.....	11.2	June 1, 1933—Dec. 31, 1933	13.8	Same period
National Association of Music Merchants.....	7.1	June 15, 1933—March 15, 1934	About 15.0	Same period
Mail Order Association of America.....	30.2	Jan. 15, 1933—Jan. 15, 1934	18.6	Jan. 15, 1934, over Jan. 15, 1933
Limited Price Variety Stores, Inc.....	7.8	Jan. 31, 1934, over Jan. 31, 1933	23.7	Jan., 1934, over Jan., 1933

* Taken from James C. Yocum, assistant deputy administrator, Distributing Trades Section, National Recovery Administration, *Problems of Retail Distribution under NRA Codes*, p. 11. Published by the Bureau of Business Research, Ohio State University.

materially increased during the past months. If consideration were given only to increases made among employees affected directly by the code, the percentage gain in pay-rolls in the case of many stores would exceed the figures quoted.

In computing figures for Table VIII the Limited Price Variety Stores Association avoided figures for November and December which represent peaks of activity in this trade.

Some observations indicate that the number of part-time employees in the larger stores has increased and that the greatest increase in the number of full-time employees has been in smaller

and medium-sized stores. This is not an illogical development. The Retail Code provides for a spread between operating hours of the store and the maximum hours which employees may work, this spread averaging about twelve hours. Stores have filled this gap by the use of a larger part-time force.

Explanations and amendments (wage and hour provisions).— There have been various amendments, orders, rulings, and interpretations governing the wage and hour provisions of the Retail Code. Some of these have had a far-reaching influence. Others have granted exemptions to the retailer who could not operate under the wage and hour provisions of the code and remain in business.

Of first importance was the President's order exempting retailers employing five persons or less whose stores are located in towns under twenty-five hundred population not in the immediate trade area of a larger town. Heralded at the outset as a boon to small merchants, this order had the subsequent effect of raising opposition to small-town chiselers.

Outside salesmen[5] were also exempted from the minimum-wage provision of the Retail Code.

Exception was granted from the consecutive-hour provision granted to employees where the lunch period is customarily longer than one hour. That is, should an extra half-hour be the custom, this half-hour need not be counted as a part of the employees' working time. On the other hand, the time of employees in "store meetings" must be paid for. This is obviously to prevent the use of store meetings as a means of securing extra service from the employees.

Retailers also received a temporary exemption from the consecutive-hour provision of the code during inventory period. The question of work hours during inventory-taking periods is as yet unsettled and has received piecemeal treatment from N.R.A.

Recent (August 23, 1934) amendments to the Retail Code affect the wage and hour provisions to the extent of fixing the

[5] An outside salesman is a salesman who is engaged not less than 60 per cent of his working hours outside the store by which he is employed.

allowable hours of work for watchmen at fifty-six in any one week, and not more than thirteen days in any fourteen-day period.

The provision of the code regarding the limitation upon the number of persons working unrestricted hours was changed, so that the total number of persons who will be permitted to work unrestricted hours shall not exceed a ratio to be computed on the average number of employees during the preceding 12 months.

Trade practices: the loss-limitation provision.—There are in the Retail Code a few simple trade-practice provisions which go farther than the most ardent reformer could have hoped for several years ago; for example, the prohibition of dishonest and deceptive advertising. Other provisions bar competitive comparisons, and general claims of continued underselling, with the consideration that such comparisons and claims are shown to be inaccurate.[6]

There is one prohibition of bribery of employees of customers, another of attempts to switch a customer from the purchase of one brand of product to another, another relating to the sale of prison-made goods, and still another prohibition of the use or acceptance of so-called company scrip. The company-scrip provision was stayed pending the report of a committee called for by the code to study this provision.

The most significant fair-trade-practice statement attempted was the loss-limitation provision. Unlike most laws, this provision began with a definition, an explanation, and an argument against the use of a "loss leader."[7] Frequently referred to as the

[6] No member of the retail trade shall use advertising which lays claim to or implies a policy or continuing practice of generally underselling competitors. As drawn for final presentation to the administrator, the term "inaccurate" was not used. General Johnson subsequently took the responsibility for this change. Retailers have since protested vigorously Johnson's action in making this change.

[7] "In order to prevent unfair competition against local merchants, the use of the so-called 'loss leader' is hereby declared to be an unfair trade practice. These 'loss leaders' are articles often sold below cost by the merchant for the purpose of attracting trade. This practice results, of course, either in efforts by the merchant to make up the loss by charging more than a reasonable profit for other articles or else in driving the small merchant with little capital out of legitimate business. It works

"stop-loss" of the "selling below cost" provision, this provision makes it a code violation for a retailer to sell below actual net delivered cost, less discounts, or current replacement cost, whichever is lower. An allowance for wages of store labor must be included in the selling price. (This allowance was subsequently set at 10 per cent.)

Retailers in towns of under twenty-five hundred as exempt by the President's executive order of October 23, 1933, are not bound by this provision. However, if they employ five or more persons, they must not sell below the cost of the merchandise to them. There are other exceptions designed (1) to meet competitor's price, (2) to permit the retailer to engage in bona fide clearances, (3) to dispose of discontinued lines and imperfect goods, (4) to liquidate a business, and (5) to sell by contract to the government and institutions. When premiums are used, the cost of the merchandise is calculated to include the cost of the premiums or a share thereof.

The labor mark-up was finally set at 10 per cent. However, N.R.A. seemed reluctant to set any percentage. Article X, section 1, of the code created a retail-trade authority which, among other things, was empowered to establish the mark-up percentage in

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back against the producer of raw materials on farms and in industry and against the labor so employed.

"1. This declaration against the use of 'loss leaders' by the storekeeper does not prohibit him from selling an article without any profit to himself. But the selling price of articles to the consumer should include an allowance for actual wages of store labor, to be fixed and published from time to time by the Trade Authority hereinafter established.

"2. Such an allowance for labor need not be included in the selling price of any article of food, or be applied by storekeepers doing business only in communities of less than 2,500 population (according to the 1930 Census) which are not part of a larger trade area.

"Provided, however, that any retailer may sell any article of merchandise at a price as low as the price set by any competitor in his trade area on merchandise which is identical or essentially the same, if such competitor's price is set in conformity with the foregoing provision. A retailer who thus reduces a price to meet a competitor's price as above defined shall not be deemed to have violated the provisions of this section if such retailer immediately notifies the nearest representative retail trade organization of such action and all facts pertinent thereto" (N.R.A. *Retail Bull. 1: Retail Code and Retail Drug Code* [Washington, 1933], p. 34).

connection with the loss-limitation provision. This body never acted on the matter officially, and an order was ultimately drawn by the administrator setting the percentage.

Loss-limitation provisions in other retail codes.—Other retail codes and supplements to the Retail Code contain similar loss-limitation provisions. For example, the Retail Tobacco Code contains a cigar-merchandising plan which looks to a possible elimination of price-cutting. In accordance with the emergency provision of this code, orders were effective July 16, 1934, permitting maintenance of "the present normal retail prices for popular brands of cigarettes—ten cents a package for those cigarettes priced by manufacturers at $5.00 or less per thousand and two packages for 25 cents for other popular grades." The mark-up basis was set at $5\frac{1}{4}$ per cent on cigarettes of $5.00 or less per thousand, manufacturers' list price, and $6\frac{1}{2}$ per cent on other cigarettes. These orders were, among other things, included to prevent the use of cigarettes as "bait" merchandise.

The booksellers' supplement to the Retail Code contains a provision which attempts to ban price-cutting competition. It now becomes illegal for anyone to sell a book at a price lower than that fixed by the publisher during the first six months after the date of publication, or, if it is published before July, before January 1 of the following year. This provision gives the bookseller the assurance that he is going to receive the profits on the book during at least one Christmas-buying season.

In the administrator's letter to the President notifying him of the approval of the code, attention was directed to the testimony given at the hearing, indicating that the loss-limitation provision in the Retail Code did not afford protection to independent booksellers from "predatory price-cutting practices." On this subject the letter continued:

> Members of the trade are facing an acute situation as a result of "loss leader" competition encountered from certain large department stores. Prior to the adoption of the Retail Code a few titles of popular new books were placed on sale occasionally as "loss leaders" or "bait" by some department stores, but the base for price cutting has spread since the retail code has been in effect. Each competing department store knows that the other cannot sell below cost and the cut-price competition is, therefore, spread over the whole

book department. Competition of this sort for the independent bookseller means eventual bankruptcy.

The President was reminded that price-cutting "has definitely oppressed small independent booksellers, depending solely upon the sale of books for existence." It was added that the sale of books "is as dependent upon a limited time factor as is the sale of newspapers and magazines about which no one would question the sale at the price fixed by the publisher, and about which no one would expect competition by the retail distributor in the form of price cutting."

The code will not affect the distribution of books by book clubs in their regular monthly selections or those published exclusively for mail-order and subscription booksellers. Among other exceptions are the sale of books as bona fide clearance, to public libraries, college libraries, church libraries, and other public agencies, and to employees for their personal use.

The drug section of the Retail Code has been amended to set the manufacturer's wholesale list price of "dozen lots or comparable quantities" as the base for the loss limitation. This amendment applies only to drug items. Items for which a manufacturer's wholesale list price in dozen or comparable units is not available are not subject to this provision. When items are not sold in dozen lots, the comparable unit is to be considered as the lowest number of the article quoted or listed and made available to all members of the trade. However, the comparable unit shall never be more than one dozen. In cases where articles are sold to retailers on the open market for less than manufacturer's wholesale list price, the manufacturer's wholesale list price in dozen quantities shall apply. Likewise, when free deals are offered as, for example, an extra package with each dozen, the unit price would be one-third of the price per dozen. Only such discounts, free deals, or rebates as are made available by manufacturers to all purchasers of dozen lots or comparable unit quantity may be considered as part of the manufacturer's wholesale list price. The term "made available to all purchasers" is ruled as not applying to a discount, free deal, or rebate offered unless it is made available by manufacturers to all purchasers subject to the Retail Drug

Trade Code, or to all purchasers in an area in which the manufacturer may be conducting a sectional promotion.

Omitting detail, the trade-practice provisions of approved retail codes are shown in Table IX.

TABLE IX

Provision	Code or Codes
1. Breach of contract	Oil Burners, Tires and Batteries
2. Use of free goods (compensation offer)	Tires and Batteries
3. Trade-name infringement	Tires and Batteries
4. False advertising	Oil Burners, Retail, Jewelry, Food and Grocery, Tire and Battery, Tobacco
5. Espionage of competitor	Oil Burner
6. Design piracy	Oil Burner
7. Defamation	Oil Burner, Retail, Jewelry, Food and Grocery, Tire and Battery, Tobacco
8. Secret rebates	Oil Burner, Tire and Battery
9. Commercial bribery	Oil Burner, Retail, Jewelry, Food and Grocery, Tire and Battery, Tobacco
10. Receipt of unearned-sales commission	Oil Burners
11. Trade-in allowance	Oil Burners
12. Unlimited terms for time payment	Oil Burners
13. Free-service offer first year	Oil Burners
14. Standard sales contract	Oil Burners
15. Mislabeling, misbranding	Tire and Battery, Tobacco
16. False invoicing	Food and Grocery, Tire and Battery, Tobacco
17. Inaccurately claims underselling	Retail, Jewelry, Food and Grocery, Tire and Battery
18. Substitutes of brands	Retail, Jewelry, Food and Grocery
19. Prison-made goods	Retail, Jewelry, Food and Grocery
20. Company scrip	Retail, Jewelry, Food and Grocery
21. N.R.A. label	Retail, Jewelry, Food and Grocery
22. Substitution of drugs	Retail Drug
23. No uniform price for prescription	Retail Drug
24. No unidentified demonstration	Retail
25. Violation of stamping laws	Jewelry
26. False use of "perfect stones"	Jewelry
27. Sale of artificial for natural stones	Jewelry

TABLE IX—*Continued*

Provision	Code or Codes
28. Shop elsewhere, buy here	Jewelry
29. Retailer may not advertise as any other type of outlet	Jewelry
30. False cataloguing of bargain prices	Jewelry
31. Unfair classification of customers	Jewelry
32. Jewelry auction (limited)	Jewelry
33. No uniform repair prices	Jewelry
34. Appraisals to be in writing	Jewelry
35. *Mala fide* advertising allowance	Food and Grocery
36. Tying clause	Food and Grocery
37. Prize or premium when deceptive	Food and Grocery
38. Adulteration of food	Food and Grocery
39. May set open prices	Oil Burner
40. Prices to be filed	Tire and Battery
41. Price guaranties prohibited	Tire and Battery
42. Financing instalments regulated	Tire and Battery
43. Same price to same class of customer	Food and Grocery
44. Emergency price may be set	Tire and Battery, Tobacco
45. *Mala fide* quantity price banned	Food and Grocery
46. Local or sectional price discrimination to injure competitors	Food and Grocery

The Retail Tire and Battery Code contains a number of additional trade practices dealing with the following:

Canceled orders to be reinstated at current prices
May not sell "firsts" as seconds
Amount of discontinued line that may be offered for sale is limited
May not sell for test purposes without approval of code authority
Male fide claim of "franchised" dealer
Sale of "change—over tires"
Cash discount not to exceed 2 per cent
System of leasing tires to be studied
No allowance on solid tires
Breaker strips are not plies
May not sell seconds to public
Recapped or retreaded tires marked
False "unconditional guaranty"
Rebuilt storage batteries, sixty-guaranty limit

Must mark capacity and quality of battery
Not to extend manufacturer's guaranty
Offer rental batteries without reasonable compensation
Offer service off premises without reasonable compensation

The trade-practice provisions of the Retail Code have undergone various amendments and interpretations. Amendments which became effective September 2, 1934, included:

Combination sales of merchandise, typical of which is the "One-Cent Sale"; and the sale of merchandise upon a condition involving the element of chance, similar to what is commonly known as the "Suit Club Plan," will, after September 2, 1934, be regarded as violations of the Retail Code.

The prohibition of combination or group sales is an addition to the code's article on loss limitation. It provides that "in group offerings or sales of merchandise, the selling price of the group shall not be less than the sum of the minimum selling prices of the individual items of the groups," as determined in accordance with provisions already in the code.

It is added that "in group offerings or sales of merchandise, where the selling price of one or more items of the group is indicated, the price indicated for each item or items, expressly or by inference, shall not be less than the minimum price of each item or items."

This does not apply to the use of bona fide premiums, nor does it apply to the sale of drugs, medicines, cosmetics, toilet preparations, drug sundries, and/or allied items described in the supplemental provisions of the code applicable to retail-drug establishments.

No retailer shall sell or offer for sale any merchandise upon a condition which involves a lottery, gamble, or element of chance, similar to what is commonly known as a "suit club plan"; provided, however, that this subsection shall not apply to non-profit organizations not definitely constituted to carry on retail trade.

Interpretations dealing with trade practices in the Retail Code have been issued from time to time. These have sought to explain and interpret the marking and segregation of clearance merchandise, what must be included in instalment-plan advertising, going-out-of-business sales, the use of the terms "factory to you," "no down payment," "bankrupt sale," "fire sale," and "removal sale."

If the merchandise is segregated from all other merchandise, and clearly identified with signs as clearance merchandise, it need not be individually marked. Clearance merchandise may be

intermingled with other merchandise, but if so intermingled, each piece must be individually marked and clearly identified as clearance merchandise.

Advertisements of merchandise or offers to sell any merchandise shall not contain a statement or representation that the merchandise may be purchased on any deferred-payment plan of whatever nature, without charge for such deferred-payment privilege, or without a charge for interest, service, or other comparable designation, when in fact differentials between prices for cash and prices for instalment-payment purchases are quoted, marked or made available for identical merchandise, or when discounts from quoted or marked prices are given on identical goods sold for cash.

Advertisements of merchandise for which charges in addition to the price of the merchandise are made for service, installation, or any other purpose (except charges on account of sales or occupational taxes) shall clearly indicate the amount of such charge.

Merchants who advertise a "going-out-of-business" sale and then add to the stock on hand newly acquired merchandise will be regarded in the future as violators of the Code of Fair Competition for the Retail Trade.

No retailer shall use statements in advertisements such as "factory to you," "direct to you," "buy from the wholesaler," or similar statements unless such statements refer to all the merchandise illustrated, advertised, or otherwise offered for sale in connection with such phrase or statement, or unless the merchandise so described is clearly segregated in the advertisement or statement in such a manner as to show just what merchandise is intended for sale under the conditions specified therein.

It shall be considered an unfair trade practice for any retailer subject to the provisions of this code, in any advertisement or other form of selling publicity, to use the phrase "no down payment," and phrases of similar or like meaning, unless each item of merchandise in the entire stock or class of merchandise offered for sale, to which the said advertisement or publicity is directed, may be purchased without any form of initial payment whatsoever, in every case, whether such payment be termed a "deposit,"

a "down-payment," an "interest charge," a "delivery charge," a "cost of delivery" arrangement, and "advance on the first payment" scheme, an arrangement whereby the purchaser is obliged to open an account and pay a fee or charge for such service, or any other form of initial payment on or before the date of delivery.

Whenever a retailer desires to limit the foregoing terms to any specific article or articles of the entire stock of merchandise for sale, such limitation must be set forth in a manner clearly to segregate and identify the items of merchandise so advertised.

It shall be inaccurate and misleading advertising and a violation of the Retail Code for any retailer to use such statements as "save one-half" or "one-fourth off," or "Bankrupt sale," or "fire sale," or "removal sale," unless such statements apply to all merchandise in the advertisement or section of the advertisement in which the statements are made.

An amendment to the Retail Code became effective September 25, 1934, which prohibits the giving of any article, free of charge, when delivery is conditioned on the outcome of some game of chance or a contest, unless the contest does not violate the lottery or gambling laws of the state or of the United States. This amendment also provides that when a contest is held, the rules must be so defined and observed that the determination of the winner rests on merit and not on chance; that the judges be competent and disinterested persons; and that all employees of the establishment and members of their families be barred from competition.

The advertising provisions in all approved codes have been clarified to prevent confusion between the giving of a calendar or some other article in a general and free distribution and commercial bribery.

[To be continued]

INSTALMENT CREDIT COSTS AND THE CONSUMER

LEBARON R. FOSTER[1]

SCRUTINY of the costs of consumer credit heretofore has centered for the most part on cash loans. By "cash loans" are meant those extended by personal finance companies, industrial or Morris-Plan-type banks, personal loan departments of commercial banks, credit union, pawnbrokers, and others lending small sums directly to consumers. This is the money-lender's field, subjected to governmental restriction and regulation from earliest times on the ground that the lending of money at an interest rate higher than an arbitrarily determined maximum is usury, and against the public interest. With attention focused upon the rate, it was inevitable that real costs to the consumer should have entered into public and private discussions. One outcome was the inclusion in the Uniform Small Loan Act of a provision requiring the lender to include all charges in a rate stated as a definite percentage per month on the unpaid balance of the loan—a method conducive to outspoken statement and fair dealing.

In recent times, the systematic extension of credit in connection with the sale of merchandise and services has developed rapidly. But this type of lending has expanded substantially without regulation. Whenever the legality of a charge for merchandise credit has been questioned, those identified with the financing of the credit have taken refuge in the legal principle that sellers are entirely free to contract with buyers as to terms and conditions of sale. Since the courts have accepted this defense, legal standards for computing rates have not been established, and consumers have been left to grope their way through the confusion of instalment terms.[2]

[1] Mr. Foster is associate director of the Pollak Foundation, Newton, Massachusetts.

[2] Most technical studies of instalment rates have been undertaken from the standpoint of the finance company or merchant. See Lorenz and Mott-Smith, *Financial*

It is the purpose of this article, first, to compare the theory and application of the more significant calculation methods and, second, to indicate the range of rates in common use.

The borrower's option.—The legal distinction between cash credit and merchandise credit rests upon a questionable economic foundation. The distinction is drawn upon origins of the need for borrowed money, rather than upon differences in the commodity itself. Observers frequently distinguish between the two credit types on the moral ground that consumers who obtain money loans are already hard pressed with debt, while purchasers on the instalment plan or on open-account credit exercise a free option. In practice, however, cash and merchandise credits are interdependent and, to a considerable extent, interchangeable.

Upon this fact of interdependence rests the argument for an accurate and complete method of stating instalment charges. The man who buys on credit enjoys, if he only knew it, a wide option in the selection of a source of funds. Having decided upon a purchase, he may:

1. Adopt the financing plan, or one of several plans, offered by the seller.
2. Arrange for financing through an outside finance company.
3. Purchase from another seller offering other terms.
4. Pay cash for the article under consideration, while resorting to credit for some other article purchased at about the same time.
5. Borrow from any one of the many types of personal finance agencies.
6. Borrow on a life insurance policy.
7. Charge the purchase on an open account for 60 or 90 days, by the end of which period he may have succeeded in reducing the balance to be financed.
8. Pay cash from accumulated savings.
9. Defer purchase until the purchase price has been saved.

Not all of these options, to be sure, are available to all instal-

Problems of Instalment Selling (McGraw-Hill, 1931), and *N.A.F.C. News*, April, 1931, June and October, 1932, and December, 1933. An analysis of costs to the consumer is given in Lewis A. Froman, "The Cost of Instalment Buying," *Harvard Business Review*, January, 1933, pp. 227–36.

ment buyers. But all find frequent representation in the stream of individual experience, and nearly every buyer has several choices open to him.

To be sure, the several types of credit present a great many differences of quality as well as price—differences in speed and convenience, in security required, in collection methods employed by the lender, in fines and extra charges for irregularity. Only through reviewing the many divergent features of each alternative can the consumer reach an intelligent decision as to the source of funds best suited to his needs. Of outstanding importance in reaching this decision is the cost.

And the cost of credit, as instalment schedules are now drawn, is one of the features most difficult of appraisal. Seemingly credit terms are often made unnecessarily complex with the deliberate aim of confusing or deceiving the customer. Dealer A offers to sell a $200 refrigerator on the following terms: the list price, less 2 per cent, for cash in 5 days; the list price in full for cash in 30 days; or 10 per cent down-payment, with the balance, plus a carrying-charge of 6 per cent a year on that balance, to be liquidated in equal monthly instalments. Dealer B will sell the same refrigerator for a down-payment of 20 per cent, the balance, plus 8 per cent of the list price, to be liquidated in twelve equal monthly instalments, with all carrying-charges waived if the account is paid up in full within 90 days. Dealer C, who finances credit sales with his personal capital, and who refuses to quote instalment terms until he has investigated the customer's credit standing, finally states his terms as $35 down, and $10 a month for 18 months. Which of the three plans offers the most favorable rate? Would it be to the advantage of the consumer to pay cash obtained as a loan from an independent agency?

Under existing divergent methods of quoting terms, it is scarcely to be wondered that few instalment purchasers can ascertain what rates for credit are obtainable. The few who exercise their curiosity often conclude, from cursory and unskilful examination, that all instalment credit is extremely costly, or all is quite reasonable. Either generalization may err widely in application to a specific case.

The ideal method of statement.—Once imbedded through long-continued usage, any system tends to perpetuate itself. Thus European civilization clung for two thousand years to clumsy Roman numerals.[3] Fortunately for future generations of consumers, no one method of stating instalment charges has yet become intrenched in American business practice.

This leaves the way open to the formulation and adoption of an ideal method. Such a method should be (1) readily understandable by consumers, in such form as to facilitate comparison with costs of other types of consumer credit, (2) easy of application in credit administration, and (3) in reasonable congruence with the costs of rendering the service. To some extent these three requisites are contradictory. And yet, no method which does not satisfy the first condition can be very useful to consumers.

It is inevitable that an extended period will be required to bring about universal adoption among instalment sellers of any logical system. Meanwhile, the inquisitive consumer has no choice but to calculate rates for himself.

Instalment-rate formulas.—The cost-rate of any instalment contract is determined by dividing the carrying-charge by the average principal of which the borrower has the use. The carrying-charge is mathematically simple to determine: it is the difference between the lowest price obtainable for strict cash and the price for buying on instalment credit. But to calculate the average principal, it is necessary to make some fundamental assumption as to the time when the carrying-charge is due. No clue is forthcoming from the instalment terms themselves; the contract customarily calls for a payment of so much every month or week until the total of principal and carrying-charge has been paid.

To illustrate: an original unpaid balance of $90 is repayable in ten monthly instalments of $10 each. Since the payments total $100, the carrying-charge is $10. It may be assumed that the carrying-charge is paid with the first payment or with the last,

[3] E. Emerson Andrews, "An Excursion in Numbers," *Atlantic Monthly*, October, 1934, p. 460.

or in some part with each payment. On the first assumption, the principal for the first month would be $90 (at the end of which time the $10 carrying-charge is paid), for the second month still $90, for third month $80, and so on down to $10 for the tenth month. The total principal of which the purchaser has the use for one month thus would be $540. On the second assumption, the principal for the first month would be $90, for the second $80, and so on, with the last payment taking care of the carrying-charge. The principal of which the customer has the use for one month on this basis would be $450. Between these extremes of $540 and $450 would lie principals calculated according to methods that assume a spreading of the carrying-charge among the several periodic payments. In brief, the earlier in the life of the instalment contract that the carrying-charge is assumed to be due, the larger the calculated principal, and (since the size of the carrying-charge is the same with all methods) the lower the calculated rate.

While at first sight it might appear that the nature of the instalment terms would determine the selection of the calculation method, such is not the case. Any one method may be applied to all cases, and, in fact, a single method *must* be consistently used if comparable results are to be obtained. A discussion of the more logical alternatives follows.

The compound-interest method.—This method, based upon accepted actuarial principles, assumes that compound interest becomes involved whenever payments are made periodically. Thus 2 per cent paid quarterly results in a *nominal* annual rate of 8.00 per cent, and in an *effective* annual rate of 8.24+ per cent. The nominal rate is that which is realized if the interest received is allowed to lie idle, while the effective rate is that which is realized if the interest is compounded, that is, if it is put to work earning interest as soon as received.[4] In theory, the effective rate is the true rate, but in practice the effective rate represents a maximum which is seldom realized because of the difficulty of reinvesting interest immediately upon receipt.

In applying compound-interest theory to the peculiar condi-

[4] E. B. Skinner, *The Mathematical Theory of Investment* (Ginn & Co., 1913), p. 59.

tions of instalment credit, the conversion interval is considered to be the period between instalment payments; in other words, interest is compounded every time an instalment payment is made. When all payments are equal, the following formula is useful:[5]

$$(p-Bi)(1+i)^n=p\,,$$

wherein B is the balance at the beginning of the credit period (the cash price less the down-payment); p, the size of each equal payment; i, the rate of interest per payment period; and n, the number of payments.

When all payments are not equal, the commonest form of terms involves a series of equal payments followed by a last "catch-all" payment which clears up the remainder due. Sometimes this type of terms is adopted in order to allow most payments to be of round amounts, such as $5.00 per month; another form is the "balloon note," which consists of a number of moderate-sized payments followed by a concluding large payment. For this type,

[5] See Froman, *op. cit.*, p. 228, for a discussion of the actuarial formula, which in the foregoing symbols is $B=p(a_{\overline{n}|}\,i)$. To those unversed in the mathematics of annuities, the formula in the text is more intelligible. The development of this formula is:

Number of the Payment Period	Balance Outstanding at the Beginning of the Period
1	B
2	$B(1+i)-p$
3	$B(1+i)^2-p(1+i)-p$
. . . . .	. . . . .
. . . . .	. . . . .
. . . . .	. . . . .
nth	$B(1+i)^{n-1}-p(1+i)^{n-2}\ldots.-p(1+i)-p$
$(n+1)$th	$B(1+i)^n\ -p(1+i)^{n-1}\ldots.-p(1+i)-p$

Since the principal and interest are liquidated at the end of the nth period, the balance at the beginning of the $(n+1)$th period equals 0.

$$B(1+i)^n-p(1+i)^{n-1}-p(1+i)^{n-2}\ldots.-p(1+i)-p=0\,,$$

which reduces to

$$(p-Bi)(1+i)^n=p\,.$$

when all payments are equal except the last, the following formula may be used:[6]

$$(Bi-p)(1+i)^n-p(1+i)=zi\,,$$

wherein the new symbols are: p, the size of each equal payment; and z, the size of the last payment. Approximate values for i in these compound-interest formulas may be obtained by substitution of successive approximations, using compound-interest tables to expedite the calculation of powers of $(1+i)$.

The rate i, which is the cost-rate per payment period, may be converted to an annual basis. Letting m denote the number of payment periods in one year (for monthly payments, m equals 12; for weekly payments, 52; etc.), the nominal annual rate is mi and the effective annual rate is $(1+i)^m-1$. Thus an instalment rate of 2 per cent per month on the actual (declining) unpaid balance is equal to a nominal annual rate of 24 per cent, and an effective annual rate of 26.8 per cent.

The compound-interest method, though constructed on a sound actuarial foundation, is unwieldy in workaday computations of instalment rates. And even were the computing less laborious, the method would still be open to criticism on the ground that the basic assumption of frequent compounding does not agree with the individual instalment purchaser's alternatives. Very infrequently can the consumer manage to compound his savings monthly, and virtually never can he do so weekly. The best that one might expect would be compounding semi-annually, in which case the practical cost-rate to the purchaser (r) would be:

$$r=\left(1+\frac{mi}{2}\right)^2-1\,.$$

[6] The development for this formula is similar to that preceding. The balance outstanding at the beginning $(n+1)$th period may be stated:

$$B(1+i)^n-p(1+i)^{n-1}-p(1+i)^{n-2}\ldots\ldots-p(1+i)-z=0\,,$$

which reduces to

$$(Bi-p)(1+i)^n-p(1+i)=zi\,.$$

This modification brings a closer approach to reality but is of no assistance in simplifying the computation process.

Present worth at simple interest.—An instalment debt may logically be considered as a group of separate debts, each of which matures at a different time. Though the separate payments are usually of equal value at maturity, each, at the beginning of the contract, may be considered to have a distinct value determined by its length of life. The problem is to find at what rate of simple interest the sum of the present values of all payments will be equal to the original balance financed.

$$B=\frac{p_1}{1+i}+\frac{p_2}{1+2i}+\frac{p_3}{1+3i}\cdots\cdots+\frac{p_n}{1+ni}.$$

The basic principle is simple enough. Its general application to instalment credit, however, is precluded by the excessively elaborate computations required for solution.

Interest payable at maturity.—Some students, drawing a parallel from promissory notes, contend that interest should not be considered payable until the maturity of a loan. On this reasoning, a 1-year note of $100 face value discounted at 6 per cent would be considered to have a principal of $94; and this principal plus $6.00 interest would be payable at maturity. If the theory is applied to instalment credit, carrying-charges are held to be due at maturity, that is, when the last payment is made. Letting I denote total carrying-charges, the formula for this theory is:[7]

$$r=mi=\frac{2mI}{n[2B-(n-1)p]}.$$

[7] The development for the formula is:

Number of the Payment Period	Principal Outstanding During the Period	Interest Arising from That Principal
1	B	Bi
2	$B-p$	$(B-p)i$
3	$B-2p$	$(B-2p)i$
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
nth	$B-(n-1)p$	$[B-(n-1)p]i$

[Footnote continued on facing page]

This formula serves when all payments are equal and when all are equal except the last. When the carrying-charge is larger than the last payment, the formula has the effect of crediting the borrower with interest paid prior to maturity.

No extended analysis is necessary to demonstrate that the parallel with commercial practice is ill drawn. The total principal and interest of a promissory note are paid at the end of its life; whereas an instalment loan has as many conjoint maturity dates as there are periodic payments.

Interest paid periodically in the proportion of the interest to the principal.—The method which, for lack of better title, herein is designated the "proportionate method" assumes that each periodic payment contains principal and interest in the ratio of the original balance financed to the carrying-charge. Thus, if a loan of $90 plus $10 carrying charge is repaid in ten instalments of $10, each payment is considered to contain nine-tenths principal and one-tenth carrying-charge.

Formulas based on the proportionate method are presented below, proceeding from the simpler to the more complex types.

When all periodic payments are equal, the following formula serves:[8]

$$r=mi=\frac{2mI}{B(n+1)}.$$

Since the interest is the sum of the right-hand column,

$$I=i\left[nB-\frac{n(n-1)}{2}\cdot p\right]$$

$$i=\frac{2I}{n[2B-(n-1)p]}.$$

[8] When all payments are equal, each payment may be expressed as $B+I/n$, and the part of the payment which is principal as $(B/B+I)(B+I/n)$, or simply B/n.

Number of the Payment Period	Principal Outstanding During the Period
1	$B/n(n)$
2	$B/n(n-1)$
. . . . .	. . . . .
. . . . .	. . . . .
. . . . .	. . . . .
nth	$B/n(1)$

Clearly, the total principal in use for one payment period is the sum of a decreasing

When all payments are equal except the last, letting z denote the last payment, the formula is:[9]

$$r=mi=\frac{2mI(B+I)}{Bn(B+I+z)}.$$

Retailers who sell on the instalment plan frequently sell the same merchandise, alternatively, on open-book credit. Other merchants who conduct credit sales exclusively on the instalment plan sometimes attempt to meet the competition of open-book credit; this they do through including in the instalment contract a clause which waives all carrying-charges if the debt is paid in full within a specified 'free-credit" period (usually 30, 60, or 90

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arithmetic progression with the common difference $-B/n$. The interest rate per payment period, therefore, is the carrying-charge divided by this principal, or

$$i=\frac{I}{\frac{B}{n}\left[\frac{n(n+1)}{2}\right]}=\frac{2I}{B(n+1)}.$$

[9] The derivation of this formula is similar to the proceeding, though the form necessarily is somewhat more complex.

Number of the Payment Period	Principal Outstanding During the Period
1.....	$\frac{B}{B+I}\left[(n-1)\cdot\frac{B+I-z}{n-1}+z\right]$
2.....	$\frac{B}{B+I}\left[(n-2)\cdot\frac{B+I-z}{n-1}+z\right]$
.....	.....
.....	.....
.....	.....
$(n-1)$th	$\frac{B}{B+I}\left[(1)\frac{B+I-z}{n-1}+z\right]$
nth	$\frac{B}{B+I}(z)$

The principal of which the borrower has the use for one payment period is the sum of a decreasing arithmetic progression of $(n-1)$ terms, plus n times the last payment; whence

$$i=\frac{I}{\frac{B}{B+I}\left[\frac{(n)(n-1)}{2}\cdot\frac{B+I-z}{n-1}+nz\right]}=\frac{2I(B+I)}{Bn(B+I+z)}.$$

days). In these cases the theory may be advanced that the customer pays a charge, not for the instalment credit granted him during the total duration of the contract, but simply for that portion granted him beyond the ordinary charge-account or free-credit period.

In calculating cost-rates which give effect to this factor, special formulas are often convenient. The following are based upon the proportionate method:

When the free-credit period contains an integer number of payment periods and all payments are equal,

$$r=\frac{2mI(n-w)}{(B-wp)[n(n+1-2w)+w(w-1)]}.$$

When the free-credit period contains an integer number of payment periods and all payments are equal except the last,

$$r=\frac{2mI(B+I-wp)}{(B-wp)[p(n)(n-1)+2nz-2w(B+I)+pw(w-1)]}.$$

When the free-credit period contains a fractional number of payment periods and all payments are equal,

$$r=\frac{2mI(n-w)}{(B-wp)[n(n+1-2w-2f)+w(w-1+2f)]}.$$

When the free-credit period contains a fractional number of payment periods and all payments are equal except the last,

$$r=\frac{2mI(B+I-wp)}{(B-wp)[(B+I)(n-2w-2f)+wp(w-1+2f)+nz]}.$$

Wherein w is the number of integer (or whole) payment periods within the free-credit period; f, the fractional remainder of payment periods within the free-credit period; p, the size of each equal payment; and z, the size of last payment.

The foregoing proportionate-method formulas can be made to serve for cost-rate analysis in the great majority of instalment cases. Even those terms which, on first examination, seem to ex-

hibit extraordinary characteristics generally will be found adaptable on further study. For example, when carrying-charges are stated to be payable in advance, such charges may be treated as an addition to the down-payment, with the result that the balance to be liquidated will be considered to consist of principal and carrying-charges. Again, when discounts are granted for strict cash payment, the cash price for purposes of computation is the nominal cash price less all discounts; and the balance to be financed is the lowest net price less the down-payment. To complete the adjustment, all cash discounts are added to the carrying-charge. When terms are so complex that the use of formulas is impractical, the cost-rate may be computed by applying the principles of the proportionate method in a simple arithmetical computation.

The assumption basic to the proportionate method finds no counterpart in actuarial practice. Indeed, it blandly ignores the science of interest, as that science has been developed in the investment and insurance world. Were merchants to state instalment charges in such form that scientific calculation methods could be easily applied, the proportionate method would not be tolerated. But as a means of analyzing the heterogeneous terms in current use, the proportionate method exhibits clear advantages of simplicity and wide applicability. Presumably that is why the method is employed in judicial administration of the British Moneylenders Act, is indorsed by the Russell Sage Foundation, and is used by the finance companies themselves.

The empirical test.—If the proportionate method is unscientific, does it give rise to significant errors? And do these errors invalidate rate comparisons based upon the proportionate method? To define, in mathematical terms, the precise limitations of each method would require an analysis beyond the scope of this article. As a practical test, however, Table I presents a wide range of rates calculated by three commonly used methods.

Commanding attention in this table is the fact that the effective compound-interest rate runs to an almost absurd extreme when payments are made frequently, as in Case F, owing to the effect of repeated compounding. If the effective rate is more apt

to mislead than to instruct consumers when used to compute costs of weekly or fortnightly terms, its usefulness obviously is limited. A second observation is that rates calculated by the

TABLE I

COMPARISON OF ILLUSTRATIVE RATES CALCULATED BY THREE METHODS

Computation Method	Case A New Auto; 12 Months' Contract*	Case B Furniture; 12 Months' Contract†	Case C Furniture; 10 Months' Contract‡	Case D Radio; 8 Months' Contract	Case E Used Auto; 12 Months' Contract	Case F Auto Tire; 10 Weeks' Contract§	Small Loan Companies 3% per Month Rate, 12 Months' Contract¶
	Calculated Annual Rates (Percentages)						
Compound interest:							
a) Nominal rate.....	23.4	6.0	10.8	30.2	38.9	92.6	36.0
b) Effective rate.....	26.1	6.2	11.4	34.8	46.6	150.2	42.6
Interest paid at maturity.....	27.2	6.2	11.4	34.3	50.6	103.0	46.2
Proportionate method.	24.2	6.1	10.9	31.1	41.1	94.5	37.8
	Relatives (Case A Rate=100)						
Compound interest:							
a) Nominal rate.....	100	26	46	129	166	396	154
b) Effective rate.....	100	24	44	133	179	575	163
Interest paid at maturity.....	100	23	42	126	186	379	170
Proportionate method.	100	25	45	129	170	390	156

* Carrying-charge includes fire and theft insurance.

† Carrying-charge: one-half of 1 per cent per month on the actual (declining) unpaid balance.

‡ Carrying-charge: 6 per cent per annum on the original unpaid balance.

§ Carrying-charge: 10 per cent flat on the unpaid balance.

¶ Interest charge computed on the actual (declining) unpaid balance.

method called "interest paid at maturity" are erratically higher or lower than those calculated by other methods, with no consistent relationship. On the other hand, an examination of the relatives in the second part of the table indicates that nominal compound interest and the proportionate method yield similar results when

either is used consistently to compare the cost of one instalment contract with another. And our immediate purpose is to determine upon a convenient tool for measuring relative costs.

A comparison of actual costs.—Some may question whether instalment rates differ sufficiently to warrant expending time and effort in computation. Others may contend that the one method widely used by instalment purchasers—the dollars-and-cents cost of buying on credit—is quite adequate as a yardstick. In this connection the findings of a survey undertaken by the writer are illuminating.

Data were gathered by direct inquiry of the investigators at showrooms, salesrooms, and stores, in order to duplicate conditions confronting the instalment buyer. Retailers co-operated in a few instances, but for the most part it was found necessary to simulate purchase intentions.

The survey covers one or more instalment plans in each of sixty stores located in seven cities of one state. No attempt was made to proportion the sampling to sales or credit volume. Rather, the objective was to discover the variety and complexity of the many types of instalment plans open to the consumer's choice. The cases and the rates computed from them, therefore, are "typical" only in the sense that they represent terms judged to be most frequently used in the sale of a given commodity in a given store.

The reader is cautioned against taking the absolute size of a rate as a criterion of profits. A rate of 100 per cent on short contracts may not cover costs, while a rate of 20 per cent may yield a large return on the employed capital. Our concern here, the cost to the purchaser, may be considered independently of profit to the merchant or the finance company.

Table II presents selected data for specific instalment cases, including annual cost rates calculated by the proportionate method. It should be noted that these rates depict the actual cost to the purchaser only in case he observes the strict letter of the contract. When he falls from grace, as so frequently happens, he may be obliged to pay relatively large fines or extra charges in

TABLE II

REPRESENTATIVE INSTALMENT CREDIT RATES, BY COMMODITIES

Commodity	Length of Contract	Carrying-Charge	Rate Quoted by Seller (Per Cent)	Computed Annual Cost-Rate (Per Cent)	Annual Cost-Rate Adjusted for Free-Credit Period (Per Cent)
New automobile*	18 mos.	$124.56	.....	21.9	.....
	18 mos.	133.00	.....	23.0	.....
	12 mos.	63.04	.....	23.3	.....
	18 mos.	95.62	.....	24.2	.....
	12 mos.	58.92	.....	24.2	.....
	12 mos.	25.00	.....	24.4	.....
	18 mos.	89.64	.....	25.2	.....
	12 mos.	47.00	.....	25.4	.....
	12 mos.	129.00	.....	32.9	.....
Used automobile*	12 mos.	56.52	.....	34.8	.....
	12 mos.	51.08	.....	36.1	.....
	12 mos.	59.00	.....	41.1	.....
	12 mos.	38.28	.....	47.1	.....
Mechanical refrigerator	25 mos.	13.50	6	8.3	8.5
	23 mos.	10.50	6	9.6	9.9
	24 mos.	20.00	10	9.7	.....
	6 mos.	3.30	6	10.3	14.5
	12 mos.	7.44	6	11.1	14.6
	12 mos.	6.60	6	11.4	20.2
	24 mos.	31.50	8	13.4	14.7
	18 mos.	16.43	10	13.4	15.1
	12 mos.	18.51	.....	13.7	16.3
	12 mos.	11.80	.....	14.5	17.3
	12 mos.	14.00	.....	14.8	.....
	12 mos.	18.00	8	14.8	17.6
	12 mos.	17.25	8	14.8	.....
	24 mos.	26.00	5	16.1	.....
	12 mos.	17.00	.....	16.4	19.7
	6 mos.	10.00	.....	17.1	24.2
	12 mos.	14.00	.....	17.8	31.9
	12 mos.	10.80	10	18.5	22.0
	8 mos.	10 64	.....	18.9	24.6
	6 mos.	8.58	.....	19.6	27.8
	30 mos.	44.54	.....	20.7	.....
	6 mos.	15.53	.....	21.4	30.3
	8 mos.	12.78	.....	47.7	.....
	6 mos.	10.80	.....	51.8	.....

* Automobile financing charges include fire, theft, and sometimes collision insurance, which protect the buyer's, as well as the seller's, equity. Only a few of the other contracts provided insurance for the buyer's equity in the article purchased. Since the automobile dealers in some cases did not know the exact value of the insurance, it was impossible to segregate it. In any case, the financing charge with insurance included represents the extra cost to the consumer of buying on instalments, for the consumer must pay for the insurance whether he wants it or not.

TABLE II—*Continued*

Commodity	Length of Contract	Carrying-Charge	Rate Quoted by Seller (Per Cent)	Computed Annual Cost-Rate (Per Cent)	Annual Cost-Rate Adjusted for Free-Credit Period (Per Cent)
Furniture	6 mos.	$ 2.83	6	6.0	20.7
	10 mos.	5.00	6	10.9	13.4
	10 mos.	4.00	6	10.9	27.8
	6 mos.	4.19	6	12.0	43.6
	12 mos.	8.93	10	18.5	22.0
	5 mos.	6.25	8	20.5	55.8
	12 mos.	8.00	10	20.9	25.1
	12 mos.	8.00	10	20.9	25.1
	10 mos.	10.50	.....	21.1	26.1
	8 mos.	9.92	8	21.3	37.6
	10 mos.	12.50	8	21.7	34.1
	6 mos.	9.50	6	22.5	84.4
	15 mos.	20.50	10	22.9	26.4
	10 mos.	4.50	10	24.4	30.5
	10 mos.	18.00	10	27.3	.....
	10 mos.	17.50	10	28.8	32.9
	8 mos.	5.00	10	31.1	40.6
	10 mos.	16.00	10	33.6	41.7
	6 mos.	8.60	10	34.3	.....
	10 mos.	19.50	10	36.8	45.9
	10 mos.	16.00	10	38.5	48.0
	10 mos.	12.80	10	38.5	48.0
	6 mos.	9.90	10	45.9	120.5
	6 mos.	9.90	10	47.9	72.5
	10 mos.	25.00	.....	55.5	69.8
Radio	10 mos.	2.50	6	11.5	23.1
	6 mos.	9.90	6	11.7	17.4
	10 mos.	5.00	.....	18.2	20.5
	9 mos.	3.20	8	19.9	32.8
	7 mos.	2.80	12	21.0	.....
	6 mos.	3.30	12	21.0	30.0
	6 mos.	2.25	6	21.7	77.8
	6 mos.	2.40	12	22.3	.....
	8 mos.	3.50	10	25.9	33.7
	19 wks.	3.00	.....	27.9	.....
	6 mos.	4.50	.....	29.1	.....
	8 mos.	4.00	10	31.2	41.0
	6 mos.	7.00	.....	48.0	195.3
	6 mos.	19.50	10†	60.8	.....
	18 wks.	4.00	10	72.5	.....
	6 mos.	9.45	.....	92.6	.....
	6 mos.	12.00	10	96.8	.....
	6 mos.	21.50	.....	98.3	.....
Automobile tire	3 mos.	0.56	4	33.6	.....
	3 mos.	1.44	4	36.0	.....
	27 wks.	3.25	10	50.8	.....

† Plus $0.75 per month.

TABLE II—*Continued*

Commodity	Length of Contract	Carrying-Charge	Rate Quoted by Seller (Per Cent)	Computed Annual Cost-Rate (Per Cent)	Annual Cost-Rate Adjusted for Free-Credit Period (Per Cent)
Automobile tire—*Cont.*	10 wks.	$ 2.00	10	94.5	.....
	10 wks.	1.80	10	94.5	.....
	13 wks.	3.25	10	106.1	.....
Domestic range.....	3 mos.	0.00	0	0.0	.....
	10 mos.	2.55	6	10.9	.....
	10 mos.	5.00	10	24.2	30.0
	6 mos.	5.00	10	68.6	100.0
Typewriter.....	5 mos.	2.00	.....	32.0	49.0
	9 mos.	5.00	.....	40.9	47.2
Vacuum cleaner.....	6 mos.	1.20	.....	14.7	.....
	6 mos.	1.00	.....	14.9	.....
	9 mos.	1.50	.....	15.7	.....
	9 mos.	2.00	.....	17.1	.....
	12 mos.	2.25	.....	18.1	.....
	12 mos.	3.00	.....	19.8	.....
Oil burner.....	27 mos.	65.75	13 (2 yrs.)	12.0	.....
Man's suit.....	25 wks.	2.97	0	53.9	.....
	13 wks.	2.97	0	103.7	.....
Jewelry.....	7 wks.	0.00	0	0.0	.....

order to reinstate his account. These penalty charges are important; but they are not determinable in advance, and consequently cannot be taken into account in a forehanded appraisal of costs. In other words, the instalment purchaser knows in advance what he must pay for credit only if he is certain that he will never become delinquent.

If there is one striking feature here in evidence, it is the great variation among terms and rates. As a generalization, one might hazard the statement that the lower rates are granted on the longer terms, the purchases of larger value, and the commodities best suited to instalment selling. But a purchaser would be foolish, indeed, to rely on such a generalization as a credit guide; from his standpoint, the numerous exceptions disprove the rule.

Still less can he rely on the rate quoted by the seller. Between quoted and calculated rates there appears no discernible relationship. In only one case, that of a furniture store charging one-half of 1 per cent per month on the balance actually outstanding in each month, was the true rate exactly as represented. Even in that case, all carrying-charges were refunded if the customer paid the full cash price within 90 days, with the result that the cost of the credit received after the first 90 days was more than three times the quoted rate. Examination of other cases involving a free-credit period (those with data in the column at the extreme right of the table) reveals that the customer frequently pays relatively dearly for the privilege of extending payments beyond the conventional 30, 60, or 90 days.

Nor is the dollar value of the carrying-charge a reliable measure. For identical terms—those having the same original unpaid balance, the same life, and the same size, number, and frequency of payments—the dollar cost is instructive. But when terms differ in any particular—and they usually differ in more than one—the dollar yardstick breaks down. It lacks the essentials of an intelligible common denominator.

Credit men have found that the instalment purchaser seldom inquires about percentage rates. Instead, he is interested primarily in dollar costs, and more especially in the amount due each month, because he wants to know whether he can fit the payments to his budget. And it is vital to his credit health that he find out.

But to maintain that consumers would make no use of a reliable means of cost comparison if it were given to them is tantamount to maintaining that consumers are not interested in the price of what they buy. It is scarcely surprising that they are not interested in percentages in the forms in which merchants at present make them available, for those percentages are almost completely unreliable and deceptive, and are therefore no criterion of cost.

The consumer, then, must know credit costs in terms of both dollars and percentage rates before he can arrive at intelligent

credit decisions. But since the consumer seldom has the mathematical background required for involved computations, the responsibility for clear and accurate statement of rates falls upon the retailer.

As retailers now state their instalment terms, it is necessary to resort to an involved calculation technique to discover actual rates. This necessity would no longer exist if all retailers were required to state their charges in terms of a percentage per month on the actual unpaid balance as it declines from month to month. Consumers could then tell, from the sellers' terms, just what rates they pay.

THE ECONOMIC ORGANIZATION AND COMPETITIVE STATUS OF THE CHICAGO POTATO MARKET

CHARLES T. BATTIN[1]

WHILE the average annual production of potatoes in the United States is 370,000,000 bushels, only about 150,000,000 bushels may be classed as the United States commercial crop, that is to say, the potatoes which are actually shipped to market. These 150,000,000 bushels, equivalent to 250,000 carloads of 600 bushels each, make up about 25 per cent of the total annual carload shipments of commodities classified as "fresh fruits and vegetables" in the United States.

There are two distinct potato crops in the United States—the early crop, which is harvested between January 1 and August 31; and the late, or main, crop, which is marketed from August of one year through July of the next year.

While the early crop includes all early-maturing varieties of potatoes wherever grown, the commercial early crop, averaging about 62,000 carloads annually, includes only the early varieties which are marketed directly without entering storage. The early crop is definitely a money or cash crop; whereas a goodly proportion of the late crop is grown for use on the farms where produced, either as seed or as food.

The late, or main, crop comprises approximately 83 per cent of the total United States production and amounts to about 300,000,000 bushels annually. About 38 per cent of the amount (188,200 carloads) is shipped each year, and an additional 28–30 per cent is marketed locally. Unlike the early crop, which is sold as fast as dug, the late crop is dug between September 1 and October 31 and marketed during the entire winter and through the early summer of the following year. This fact necessitates placing large quantities in storage at digging time for preservation until needed in the consuming centers. During five years,

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1927–31, between 46 and 47 per cent of all carload shipments of late potatoes were made after January 1.[2]

The position of Chicago in relation to the flow of potatoes to market.—The Chicago metropolitan area has a total population of approximately 4,100,000. Located, as it is, between important growing regions on the one hand and great consuming centers on the other, Chicago is a natural concentration and distribution point for potatoes. Wisconsin, Minnesota, Colorado, and Idaho, all heavy shippers of late potatoes, lie west and north of Chicago. The great industrial centers of Illinois, Indiana, Ohio, and Pennsylvania, heavy consumers of late potatoes, lie east and south of Chicago. The principal early potato-growing states, also heavy consumers of late potatoes, lie still farther south and east of Chicago. These latter states ship great quantities of early potatoes into the central and north central states north and west of Chicago. Thus Chicago, located at the southern point of Lake Michigan, is directly in the path of any movement from the north and west to the south and east, and vice versa (see Fig. 1).

This strategic geographical location has been emphasized by the fact that every important railway system, except one, which penetrates the territory west of the Mississippi River has its eastern terminus in Chicago. On the other hand, most of the railroads serving territory east of the Mississippi River have their western termini in Chicago. The freight-rate structure has been developed in such a way as to accentuate this situation. Thus Chicago becomes, in effect, a focal point between the regions of potato supply and the regions of demand.

Proportion of United States crop handled through Chicago.—Approximately 31,600 carloads (equal to 12.5 per cent of the total commercial potato crop of the United States) enter Chicago as arrivals each year. Of these 31,600 carloads, 16,100 are unloaded in Chicago. Approximately 4,000 of the 16,100 carloads are early-crop potatoes and comprise 6 per cent of the total early crop entering commerce, while the remaining 12,100 carloads are late-crop potatoes comprising 6.4 per cent of the total commercial

[2] L. C. Tate, *Marketing Idaho Potatoes, Summary 1930–31 Season* (U.S. Department of Agriculture, mimeographed).

a) Late-crop potatoes

b) Early-crop potatoes

FIG. 1.—Flow of potatoes into and through the Chicago wholesale potato market

late crop.[3] Some 14,500 of the 31,600 carloads listed as arrivals in Chicago (equal to 5.5 per cent of the total commercial crop) are

[3] Calculated, from data in the seasonal summaries of regional marketing of potatoes, by the Market News Service, U.S. Department of Agriculture (mimeographed).

reshipped to other markets (see Table I). An additional 15,000–25,000 carloads, mostly late potatoes, are sold by Chicago dealers either billed direct from growing regions to final destinations or routed via Chicago on through bills of lading. Most of the terri-

TABLE I*

ARRIVALS, UNLOADS, AND RESHIPMENTS OF POTATOES IN THE CHICAGO MARKET, 1916–31, INCLUSIVE

Year	Total U.S. Shipments (Cars)	Arrivals at Chicago (Cars)	Percentage of Total U.S. Shipments	Unloads at Chicago (Cars)	Percentage of Arrivals	Reshipments (Cars)	Percentage of Arrivals	Population of Chicago (000 omitted)	Unloads per Capita (Bushels)
1916	158,476	18,631	11.1	12,125	58.7	5,506	31.3	2,810	3.01
1917	161,842	20,967	12.8	9,608	45.8	11,358	34.2	2,901	2.32
1918	169,462	24,181	14.4	12,477	51.1	11,707	48.7	2,971	2.90
1919	181,277	24,190	13.3	12,158	50.2	12,037	49.8	3,037	2.80
1920	185,176	20,115	10.8	11,302	56.3	8,813	43.7	3,095	2.52
1921	218,001	21,318	9.7	13,077	61.3	8,241	38.7	3,180	2.67
1922	245,407	20,025	8.1	13,912	69.4	6,113	30.6	3,295	2.53
1923	241,603	22,359	9.2	14,436	69.0	8,923	31.0	3,430	2.50
1924	252,097	22,964	9.1	15,664	68.0	6,700	32.0	3,568	2.61
1925	241,523	23,501	9.6	14,768	62.8	8,733	37.2	3,669	2.40
1926	232,424	29,011	12.5	14,856	51.2	14,155	48.8	3,741	2.38
1927	253,445	31,015	12.2	15,658	50.5	15,330	49.5	3,839	2.47
1928	257,343	33,607	13.0	16,311	48.0	17,296	52.0	3,900	2.49
1929	251,168	32,891	13.0	15,826	48.1	17,068	51.9	3,978	2.30
1930	252,411	30,708	12.1	16,298	53.0	14,410	47.0	4,083	2.39
1931	239,913	29,937	12.4	16,408	54.8	13,529	45.2	4,182	2.34

* Total United States shipments for 1916 are estimated in order to complete the table. Total shipments for the remaining years are taken from the Yearbooks of the U.S. Department of Agriculture. Arrivals at Chicago, 1916–22, are from the Chicago Board of Trade records, and 1923–31 are from records of the local Market News Service of the Bureau of Agricultural Economics at Chicago. The unloads are from the Statistical Bulletin No. 10, U. S. Department of Agriculture, and the records of the Chicago office of the Market News Service, U.S. Department of Agriculture. Reshipments are calculated as the difference between arrivals and unloads. The population is that of the Chicago metropolitan area, which includes Cook and Dupage counties of Illinois.

Though prior to 1923 a carload was regarded as 700 bushels, 600 bushels are now considered a carload. The summer minimum carload is 500 bushels, while the winter minimum is 600 bushels. The Maine crop is still handled mostly in 700 bushel carloads.

tory between the Mississippi River on the west and a line drawn roughly from Pittsburgh south to Florida on the east depends on Chicago dealers for its principal late-potato supply. In reverse order, much of the territory north of the Ohio and Missouri rivers between Pittsburgh and Omaha depends upon Chicago dealers for supply of new potatoes. Thus, for every carload of potatoes unloaded in Chicago a fraction over two carloads are sold by

Chicago dealers and either reshipped from Chicago or shipped direct from growing sections to consuming markets in these territories. It is estimated by Chicago dealers that approximately 20 per cent of the total United States commercial potato crop is sold through the Chicago market.

The sources of supply of the Chicago market.—The sources of white potatoes entering regular channels of trade are found in relatively few highly specialized regions. The early crop is produced in thirteen states in the South and makes up a little over 20 per cent of all potatoes entering commerce. No more than 13 per cent of total arrivals of potatoes in the Chicago market consists of early potatoes. Late potatoes are grown commercially in thirty-five states and comprise 87 per cent of the total volume of potatoes handled through the Chicago market. Because of the relative unimportance of the early crop, the emphasis in this discussion will be on the late crop.

The thirty-five late-crop states may be divided into two groups: one made up of nineteen states called the "surplus-producing late-crop states" because they produce more potatoes than they consume, shipping the surplus to other sections; and the other group made up of sixteen states called the "deficit-producing late-crop states" because they consume more late-crop potatoes than they produce, importing enough late potatoes from other states to make up the deficit.

The nineteen surplus states ship an average of 185,000 carloads, while the sixteen deficit states ship annually 13,000 carloads of potatoes equal to 74 and 5 per cent, respectively, of the total United States shipments.[4] Practically all these shipments of deficit states are intrastate from growing sections to nearby markets. Although six of these deficit states produce a large surplus of early-crop potatoes, they ship them as fast as dug during a short season of 60–90 days. These states must then depend upon late-crop potatoes during the remaining 9 or 10 months of each year. Since their production of late-crop potatoes is insufficient to supply their needs, they must ship potatoes in from the surplus states. The remaining thirteen states ship 42,400 carloads of early

[4] These figures include the mid-season potatoes in the early crop.

potatoes, equal to nearly 20 per cent of the total shipments of the United States, but they are definitely without late-crop potatoes.

The sources of Chicago's potato supply, located in thirty-nine states and two foreign countries, are more widely scattered than those of any other large city. St. Louis is second, with sources in thirty states. Chicago depends, however, mainly upon four states —Wisconsin, Minnesota, Colorado, and Idaho—for its late-crop potatoes, and upon six states—Virginia, North Carolina, Louisiana, Texas, Missouri, and Kansas—for its early-crop potatoes.

Chicago receipts are increasing from more-distant growing regions and decreasing from nearby regions. Arrivals from Wisconsin at Chicago increased 585 carloads, while unloads decreased 1,864 carloads from 1924 to 1931. In the same period arrivals from Minnesota decreased from 4,800 to 2,400 carloads and unloads declined from 2,400 to 500 carloads. In contrast to this trend the arrivals at Chicago from Idaho increased from 1,300 in 1925 to 8,400 in 1931, and from Colorado they increased from 400 carloads in 1925 to 1,500 in 1931. The unloads at Chicago from Idaho increased from 1,000 carloads in 1925 to 5,000 in 1931, and from Colorado they increased from 300 carloads in 1925 to 1,100 in 1931. The difference between arrivals and unloads represents reshipments from Chicago.

The consumption of potatoes.—One method of estimating total consumption of an agricultural commodity is to assume that the total production of the commodity is the measure of its consumption. By comparing the annual production of a given crop with the annual prices received for it over a period of years, and by selecting the production in those years in which the prices approximate the average price for the whole period, it is possible to arrive at an estimate of the size crop which will be consumed at fair prices.[5] This size crop could reasonably be regarded, therefore, as the measure of average consumption.

[5] Fair prices are those which cover costs of production, handling, and selling, including a small profit to pay for risk. If competition is free, the average price over a period of years will be such a fair price. If this is true, it may fairly be reasoned that the production in those years in which the annual prices approximate the average long-time price is the measure of average or normal demand for the commodity. Demand is so considered in this discussion.

Table II shows that whenever production per capita in the United States from 1913 to 1930 ranged between 3.3 and 3.6 bushels, the price approximated $1.86 per hundred pounds, which is the average price for the entire period. There was least fluctuation of prices when production was within these brackets. Whenever production exceeded 3.6 bushels per capita, the price fell far below $1.86 per hundred pounds; and, on the other hand, whenever production was less than 3.3 bushels per capita, the price rose much higher than $1.86 per hundred. It would seem reasonable to conclude, therefore, that there has been a demand during this period for a production of 3.3–3.6 bushels of potatoes per capita in the United States.

TABLE II*

PER CAPITA PRODUCTION AND PRICES OF POTATOES IN THE UNITED STATES, 1913–30, PRICES ADJUSTED TO THE 1926 PRICE-LEVEL

Season	Total Production in U.S. per Capita (Bushels)	Chicago Wholesale Price per 100 Lb. (Dollars)	
1912–13	4.4	1.01	
1917–18	4.3	1.26	
1914–15	4.2	1.15	
1922–23	4.1	1.02	
1918–19	4.0	1.20	
1928–29	3.9	1.16	
1920–21	3.8	1.22	
1924–25	3.7	1.13	
1923–24	3.7	1.22	
1915–16	3.6	1.89	Av. these four seasons, $1.86
1913–14	3.4	1.70	
1921–22	3.3	1.82	
1927–28	3.3	2.18	
1919–20	3.1	2.88	
1926–27	3.0	2.65	
1929–30	2.9	3.00	
1925–26	2.8	3.52	
1916–17	2.8	3.63	
Average price for the entire period		1.86	

* Per capita production equals total production divided by total population. Prices are average seasonal prices from September to May of sales to jobbers at Chicago adjusted to the 1926 level.

The actual consumption per capita is probably much less than production, owing to loss through spoilage and waste and to a part of the production being unfit for food. If the 10.7 per cent which is unfit for food or seed[6] and the 15 per cent which is lost in storage and handling[7] are deducted from the total production, there is left between 2.5 and 2.6 bushels per capita for actual consumption. Table I, last column, indicates that the consumption of potatoes in Chicago varied from 3.01 to 2.3 bushels per capita from 1926 to 1931. While an excess production of nearly one-third above actual consumption to cover loss and wastage seems most uneconomical, any study of the production of potatoes and the conditions as they actually exist will have to include this extra bushel per capita.

The trend of consumption of potatoes in the United States has been downward in recent years. While total consumption reached its peak in 1923,[8] per capita consumption of potatoes reached its peak some 8 years earlier.[9] Per capita consumption increased from 2.5 in 1897 to 3.74 bushels in 1916, when the peak was reached, and then declined to 2.92 bushels in 1931. The unloads of potatoes in Chicago corroborate these figures, since they declined from 3.01 bushels per capita in 1916 to 2.34 in 1931 (see Table I, last column). Another evidence of this trend is the fact that production of only 2.9 bushels per capita in 1931 brought only $1.12 a hundred pounds in Chicago, the lowest price since 1915. When this price is adjusted to the 1926 level, it is increased to only $1.56, which is still $1.44 per hundred less than potatoes should have brought if demand had continued the same as in earlier years. According to Table II, a production of 2.9 bushels per capita should have commanded $3.00 per hundred when adjusted to the 1926 price-level. It seems reasonable to conclude, therefore, that consumption of potatoes in the United States is declining.

[6] *Farmers' Bulletin No. 1578* (U.S. Department of Agriculture), p. 4.

[7] Holbrook Working, *Technical Bulletin No. 10* (University of Minnesota Agricultural Experiment Station, 1925), p. 21.

[8] Eldon Atwell Wixen, *University of Maine Studies*, 2d Ser., No. 12 (1929).

[9] Per capita consumption reached its peak earlier than total consumption because population increased faster than production.

The trade organization.—Any person in the business of buying or selling produce in carloads is called a dealer.[10] There are two general classes of dealers involved in supplying Chicago with potatoes. One class is found in the growing regions and the other in the Chicago market.

Dealers in the growing regions which supply Chicago with potatoes are of four main types—chain-store buyers, co-operatives, wholesale branch buyers, and local dealers—the latter of which may be subdivided into "single-station" dealers, "many-station" dealers, "fly-by-night" dealers, and truck-drivers. All of these types operate at railroad stations which serve as concentration and shipping-points for potatoes.

Dealers in the Chicago wholesale potato market are of two kinds—carlot receivers and jobbers. Carlot dealers are to two types—brokers, and carlot receivers proper.

Brokers, who have only office space, and no regularly established organization, simply negotiate contracts of sale between seller and buyer. There are no genuine potato brokers in the Chicago market, most of such business being handled by regular carlot receivers, who occasionally sell a car on a brokerage basis.

Carlot receivers theoretically purchase carloads of potatoes from growers and dealers in the growing regions and sell them in the wholesale market to jobbers or to anyone who will buy a carload. The Chicago market is unique in that the activities of its carlot receivers, more nearly than those in any other market, approach the limits implied in the theoretical definition.

There are eighteen firms classed as regular carlot potato receivers in the Chicago market; only two maintain stores and do a jobbing business also. Four are in and out of the market; two are in process of being eliminated, and two more operate in potatoes only during the early-crop season. The remaining eight firms do the bulk of Chicago's wholesale potato business. Two have chains of warehouses throughout the Chicago supply area, two have warehouses in certain sections of this area, while two firms have only a few warehouses. The other two firms have no warehouses

[10] *Service and Regulatory Announcement No. 121* (U.S. Department of Agriculture, Bureau of Agricultural Economics).

but do a large carlot-receiving business, handling potatoes on both a commission and an outright-purchase basis.

Only one Chicago carlot receiver has head offices outside the city, though two others have branches in other cities. Ten are organized as partnerships and handle 65 per cent of all potatoes sold through the Chicago market. The two largest, one medium sized, and one small firm are organized as corporations. These four corporations, together with the Atlantic Commission Company, handle about 30 per cent of all potatoes sold through the Chicago market, leaving less than 10 per cent to be handled by individually owned enterprises.

While Chicago carlot receivers handle some 16,000 carloads, or more than 95 per cent of all potatoes unloaded in Chicago,[11] this business makes up only about one-third of their total potato business. The other two-thirds consists of sales of cars reshipped from Chicago or shipped direct from the growing regions to other markets.

In the Chicago market the term "jobber" is loosely applied to both regular jobbers and commission merchants. The commission merchant operates a store and receives potatoes in carlots, disposing of them through his store on commission. The distinction between commission merchant and jobber is that the former acts as an agent for undisclosed principals, whereas the jobber disposes of produce which he has purchased.

There are twenty-five regular jobbers who handle principally potatoes in the Chicago market. The majority of these have their stores in South Water market, although several have stores in West Randolph market, two have stores in Fulton market, and four have stores in South State Street market. Five jobbers have stores in both South Water and West Randolph markets. There are numerous opportunities for specialization in the Chicago jobbing market, such as supplying the hotel and restaurant trade; department-store trade; institutional, boarding-house, and club trade; and regular retail-store trade.

[11] This includes sales of the Atlantic Commission Company, purchasing agent of the Atlantic and Pacific Tea Company chain, though this company is not usually included among regular carlot receivers.

The final step in the distribution of potatoes in the Chicago market is performed by three types of organizations—retail stores, peddlers, and institutions such as hotels, hospitals, etc.

Retail stores consist of chain grocery stores, which handle 40 per cent of all potatoes sold in the Chicago metropolitan area;[12] independent grocery stores, 8,475 in number, which, together with 1,231 fruit and vegetable stores, handle 33 per cent; and department stores, handling 2 per cent of total Chicago sales.[13]

Peddlers handle 3.5 per cent of Chicago unloads,[14] while hotels and restaurants, 3,519 in number, handle 15.3 per cent and hospitals and other eleemosynary institutions handle about 1.4 per cent. Certain small industries, such as soup-makers and potato-chip-makers, handle another 1.5 per cent, leaving 3.5 per cent to be accounted for by roadside markets, express and truck shipments out of Chicago, and by waste.

Methods of purchase and sale in the Chicago market.—Chicago carlot receivers obtain potatoes by outright purchase through maintenance of warehouses in the growing regions, which is the most important method, and through solicitation by wire and correspondence. They occasionally grow some potatoes on their own account, leasing land and machinery and hiring all labor.

When buying direct from the grower through warehouses, the carlot receiver ordinarily pays cash upon delivery at the shipping-point. As each wagon load is bought, the potatoes are run over a grader, sacked, weighed, and loaded into a railroad car or into the warehouse, the purchaser paying the cost of labor and sacks.

When buying from local dealers and shippers, carlot receivers usually solicit business by wire or correspondence. They pay cash for potatoes on track at the shipping-point, title passing at time of payment or at time car starts moving toward the market; or they buy subject to inspection at destination, paying cash against draft for the actual weights verified as the potatoes come out of the car.

[12] From correspondence with two leading chains in Chicago.

[13] The numbers of different stores were obtained from *Wholesale and Retail Trade of Chicago* (Chicago Association of Commerce, 1927).

[14] Charles Kaufman, vice-president of Chicago Jobbers Association.

Receivers sometimes purchase on joint account, a method midway between outright purchase and buying on commission, whereby the local shipper grows or buys the potatoes and the receiver sells them, each sharing equally in the profits and/or losses.

Most of the potatoes handled on commission by Chicago dealers are obtained through solicitation by wire and correspondence, some through contracts with growers' exchanges, and relatively few through various methods of financing growers and shippers or on consignment without solicitation of any kind. Carlot dealers receive as commission a fixed sum per car typically ranging from $15 for handling late-crop to $25 for selling early-crop potatoes. The difference in commissions is due to difference in risk, which also accounts for the greater percentage of early potatoes being handled on commission.

Jobbers buy from carlot receivers for the most part in carloads, outweight basis, for cash. A few jobbers, known as "combination jobbers and receivers," occasionally obtain a carload of potatoes on consignment. Some jobbers, especially in the outlying markets, buy potatoes for cash in increasing amounts from truckers who haul in from Michigan and Wisconsin. Truckers buy from growers for cash, usually depending upon their own resources for funds.

Carlot receivers sell for cash either on an outweight basis, collecting for actual weights verified when the potatoes are unloaded, or on an invoice-weight basis, collecting for weights stated in the invoice and bill of lading accompanying the draft.

Chicago potato wholesalers maintain a credit and collection bureau.[15] When a sale is completed, three copies of the invoice are made, the original going to the purchaser, the duplicate going to the credit bureau, and he triplicate remaining with the seller. The manager of the bureau checks these invoices against the credit standing of each purchaser, and, if he finds that any particular jobber is buying more than his financial standing will warrant, he informs the carlot receivers, who curtail their sales to this job-

[15] The Credit Bureau of the Chicago Potato Division of the American Fruit and Vegetable Shippers' Association.

ber. The manager of the bureau makes collections on all invoices, payment being received only by check drawn to the credit of the seller, but remitted to the manager of the bureau, who then turns the check intact over to the seller. Payment is required within 72 hours, 12 o'clock noon of the third day after sale being the deadline. If any purchaser waits beyond this limit to settle, he is promptly reported to the dealers, who refuse to sell him any more potatoes until he has made full settlement. This plan has been attacked in the courts but without success,[16] the courts ruling that it is not illegal to take such action to protect unsound accounts.

The manager of the bureau is a practicing attorney with 12 years' experience in the legal aspects of the fruit and vegetable business and is paid a flat sum for his service. This cost is assessed back against each member in proportion to the number of invoices he has passing through the bureau each week.

Jobbers' terms are usually cash within the same week of purchase, or at most within ten days. Truckers also sell for cash to either jobbers or retailers.

Futures transactions in potatoes are relatively few. The Chicago Mercantile Exchange inaugurated such trading in January, 1931, and is the only exchange in existence which sponsors regular trading in potato futures. Potatoes constitute the first vegetable crop to be listed on a commodity exchange in the United States. This listing has been made possible through the general adoption of the United States potato grades and the importance of the Chicago wholesale market.

Some effects of the development of chain stores on the Chicago wholesale potato market.—In 1931 chain stores handled 6,617 carloads, or 40 per cent, of all potatoes unloaded in the Chicago metropolitan area.[17] It is estimated that of this amount 60.5 per cent was bought direct from growers, dealers, and shippers and represents a loss of business for Chicago wholesale dealers.[18]

This loss of business to the chains, equal to nearly 25 per cent

[16] *U.S.* vs. *Furdressers and Fur Dyers Association*, 5 Fed. (2d) 869.

[17] From correspondence with the two largest chains in Chicago.

[18] This estimate is based on the findings of the Federal Trade Commission; see *Sources of Chain Store Merchandise*, Senate Document No. 30.

of the total volume of Chicago unloads, has forced a high degree of specialization among Chicago wholesale dealers. Wholesale firms without large organizations and established connections have had to give way to the larger and more specialized houses, that is to say, to houses with large capital, with facilities for financing growers, with chains of warehouses in the growing regions and wide acquaintance among distributors in many markets. Wholesale receivers, in order to keep up their volume, have increased their sales by telegraph and telephone, to chains to some extent, but especially to outlying towns and cities, thereby transferring the place of sale from the tracks in the potato terminals to the offices of the carlot receivers. Thus, instead of the offers to sell and the bids to buy being exchanged in person at the car door, a large part of them are made by telephone and telegraph in offices many miles from the actual location of the potatoes, which are then shipped direct.

As chains have cut deeper and deeper into the wholesalers' volume by purchasing direct from growers and country dealers, Chicago receivers have redoubled their efforts to obtain new customers in more distant markets. These efforts are especially noticeable in southern states, where chains have developed less rapidly than in the upper Mississippi Valley. To whatever extent they have succeeded in tapping new markets the trading radius of Chicago wholesalers has actually been extended.

Even more than the wholesaler, the jobber has had to specialize in the trade of particular classes of clients whose demands are a little different from the ordinary, such as institutional buyers, restaurants, and clubs of every description, in order to establish for themselves a permanent market. Where jobbers formerly waited in their stores for buyers to call, they now send salesmen to seek out buyers, and offer them numerous services, including delivery, as inducements to buy. As chains have displaced independent grocers in suburbs and small outlying towns about Chicago, they have automatically reduced the radius of jobbers' sales. On the whole the outlook for orthodox channels of distribution in the Chicago wholesale potato market is not encouraging.

The effect on the Chicago wholesale potato market of the marketing of potatoes by motor truck.—The use of motor trucks in the distribution of potatoes has had a remarkable growth in recent years. Trucks are used to move potatoes from the farms to large central markets, to redistribute potatoes from large central markets to final consuming markets, and to distribute potatoes from wholesale firms direct to smaller consuming markets.

In a detailed study of the use of motor trucks it was found that during the 1928–29 season 25 per cent of all potatoes shipped from sixteen different producing sections were moved in motor trucks.[19] These sixteen sections represent a very large territory, covering Connecticut, Delaware, southern Illinois and Indiana, Maryland, Massachusetts, southwestern Michigan, New Jersey, New York, Pennsylvania, Virginia, and West Virginia.

In 1928–29 these sections combined shipped 55,921 carloads of potatoes, of which 14,219 carloads, or 25 per cent, were moved to market by motor truck. Several city markets in or near these sections obtain most of their potatoes by motor truck. In 1928 Buffalo obtained 57.8 per cent, Rochester 77.1 per cent, and Syracuse 75 per cent by motor truck. It is estimated that 7 per cent of the total commercial potato crop was moved to market by motor truck in 1928.[20] This percentage has been increased each year since.

There are two functions of the Chicago wholesale potato market, one concerned with supplying Chicago and the immediate vicinity, the other with supplying the numerous cities east and south of Chicago. The movement of potatoes by truck into the Chicago market itself has been slow to develop, being estimated at about 200 carloads in 1931 and about 600 carloads in 1932.[21]

The use of motor trucks in moving potatoes into markets to which Chicago wholesalers reship or sell direct has been much greater than it has in the Chicago market itself. One of the sec-

[19] Brice Edwards and J. W. Park, *Marketing and Distribution of Fruits and Vegetables by Motor Truck*, Technical Bulletin No. 272 (U.S. Department of Agriculture, 1931).

[20] Local representative of Market News Service, Chicago office.

[21] *Idem.*

tions from which Chicago wholesalers have handled many shipments of potatoes to other markets is Michigan. The principal market outside Detroit for Michigan potatoes is in the cities of Indiana and Ohio. In order to estimate the increase in movement of potatoes by truck from Michigan, two years (1926–27 and 1931–32) of approximately equal production were selected; the earlier of these years antedates any significant use of trucking. The shipments of potatoes by rail from Michigan to Ohio and Indiana for the two years were compared.

The rail shipments of potatoes from Michigan to Ohio and Indiana were 5,406 carloads in the earlier year and only 2,314 carloads in the later year, a difference of 3,092 carloads.[22] These 3,092 carloads can fairly be considered to represent the movement of potatoes from Michigan into these two states by motor truck in 1931–32. Actually the amount so moved was probably much larger, owing to the unusually large crops of Maine and New York in 1931–32 which shut Michigan out of eastern markets and forced Michigan growers to dump into Ohio and Indiana the surplus potatoes usually sold much farther east.

The same method of comparison was used to arrive at estimates of truck movements of potatoes from New York into Pennsylvania and Ohio, with similar results. There were approximately 1,000 carloads shipped by motor truck from New York into these states in 1931–32.

The total receipts of potatoes by rail in Illinois,[23] Indiana, Ohio, and Kentucky from four states (New York, Michigan, Wisconsin, and Colorado) were 10,823 carloads in 1926–27; whereas in 1930–31 the receipts from these states were only 2,775 carloads, a reduction of 8,088 carloads. Deducting an increase in rail receipts from other sources of 2,017 carloads leaves a deficit of 6,071 carloads in these states, which was undoubtedly made up from receipts by motor trucks.

These four states constitute a very substantial portion of the market of Chicago carlot receivers, and this movement by truck

[22] Summaries of Michigan shipments of potatoes into Indiana and Ohio, by R. E. Keller, assistant marketing specialist, Grand Rapids, Michigan.

[23] Chicago receipts not included in Illinois total.

into these states means a serious reduction in Chicago wholesalers' total volume of business unless they can make it up by tapping more distant markets. One evidence that such tapping of distant markets is taking place is the fact that unloads of Colorado and Nebraska potatoes amounting to 267 carloads in all southeastern markets in 1926–27 increased to 3,202 carloads in 1930–31. Practically all such shipments pass through the hands of Chicago dealers.

By supplying the small cities, country towns, and mining districts with potatoes, the truckmen have practically eliminated carlot sales to most small cities and towns north of the Mason and Dixon line and to some of them south of that line. In 1926–27 Michigan shipped potatoes by rail to 190 destinations in Indiana and Ohio, while in 1931–32 rail shipments were made to only 64 destinations in these states. In 1926–27 Wisconsin shipped potatoes by rail to 363 destinations in Illinois, Indiana, Ohio, and Kentucky, while in 1930–31 this number dropped to 147.

This loss of carlot business to small towns is compensated for, to some extent, by the tendency of truckers to buy their supplies from secondary wholesale markets like Indianapolis and Pittsburgh for redistribution to smaller cities and towns within a radius of 50–150 miles. It has been estimated that 50 per cent of the total receipts on the wholesale market at Pittsburgh was trucked out of the metropolitan area in the spring of 1930, and that at Baltimore 24 per cent was so trucked. The area within 50 miles is now usually supplied by trucks from city markets, while beyond 50 and up to 150 miles, trucks compete with mixed cars and with express shipments from the city, and even with carlot shipments direct from producing sections.[24] Several Chicago wholesalers stated that, while their sales in all small towns had been reduced, sales to points like Pittsburgh, Memphis, and other secondary markets had been increased. The net effect, however, has undoubtedly been to reduce the total volume of their business.

As the use of trucks increases, there seems to be emerging gradually some sort of system and organization out of what has

[24] Brice Edwards and J. W. Park, *Marketing and Distribution of Fruits and Vegetables by Motor Truck*, p. 73.

been a very chaotic business. The development of the great wholesale and jobbing truck market at Benton Harbor, Michigan, points in this direction. Here is evolving a machinery of marketing fruits and vegetables entirely divorced from orthodox channels based on rail transportation. In this market farmers and truckers acting as local dealers meet large trucking vans which are operated by a kind of wholesale dealer who takes the produce he buys to some market generally in a small town, though not necessarily, where he sells it to one or more small jobbers, who in turn distribute to retailers. While this market is the most famous, there are numerous others in embryo springing up in different parts of the country. Mixed in with this farmer-dealer-truck-wholesaler-jobber chain are many other types of speculators and peddlers. While the lines are not very clearly drawn as yet, there are many evidences that an entirely new system of purchase and sale of farm products is emerging.

In markets such as Pittsburgh and New York several combination wholesaler-jobbers are giving their attention to receiving truckloads and jobbing them out to smaller jobbers and retailers. This type of adaptation has not made much headway in the Chicago market, although some jobbers located outside South Water and Randolph markets are experimenting with it. In a few cases these jobbers even handle truckloads of potatoes on commission. Such cases usually occur when farmers who haul their own potatoes are in a hurry to return to their farms.

The fact that, in so far as line haul alone is concerned, it is cheaper, as a rule, to ship potatoes by rail when the distance involved is over 50 miles, makes it difficult for the orthodox wholesaler to see how he can secure a part in the new development with profit to himself. Although the cost of hauling potatoes to and from the railroad must be added to the charge of the line haul, this cost varies so much that it is difficult to calculate the relative costs of rail and truck movement to market. However, the gradual appearance of wholesale trucking markets seems to point the direction the movement will take.

One effect of the use of motor trucks in marketing potatoes has been to extend the boundaries of rail distribution because carlot

wholesalers have been compelled to seek markets farther afield in order to maintain their volume. At the same time the density of rail distribution of potatoes has been reduced by virtue of the demand being partially satisfied by truck distribution.

These changes in methods of distribution illustrate the revolutionary nature of what is happening. Before the time of railroads merchandise was distributed by peddlers; but with the coming of the railways and their monopoly of transportation, goods were distributed through the stationary store. A merchant could sit down at a strategic place and build prestige for his organization in that place. But with the development of the use of motor trucks there is emerging a new and independent system of distribution. The transportation vehicle itself is becoming the store, and to the extent that this is true we are returning to the peddler system. The institutions of distribution built up on the services of the railroad system are suffering the disorganization attendant upon transition.

THE DISTRIBUTION OF GRAIN AND GRAIN PRODUCTS FROM THE CHICAGO MARKET[1]

EDWARD A. DUDDY AND DAVID A. REVZAN[2]

IN A recently published study[3] the authors have shown how grain receipts were concentrated at Chicago from a wide area of supply in the central and southwestern states during the crop years 1924–25 through 1932–33. The purpose here is to reveal the disposition of these receipts during the same period.

Figure 1 shows the long-time fluctuations in grain shipments since 1858, based on data from the *Annual Report of the Chicago Board of Trade for 1933*. The shipments of five grains—barley, corn, oats, rye, and wheat—have varied from 13,322,000 bushels annually to 282,800,000 bushels. Three phases of the general movement are apparent: (1) from 1860 to 1880 the greatest relative increase took place, the volume of shipments increasing fourfold; (2) the period 1880–1915 was one of slower growth, shipments doubling during this time; (3) in the period since 1915 grain shipments have declined to 1878 levels, the volume since 1930 varying between 89 and 109 million bushels annually.

Over the period as a whole, shipments of corn have tended to be larger than the shipments of any other grain, although since 1890 shipments of oats have been on approximately the same level as corn. Corn shipments have varied from 4.3 to 130.4 million bushels each year. After increasing in volume six times from 1858

[1] This is the first of two articles on this subject. Readers desiring more complete statistical information on grain shipments may obtain copies of tables omitted from the text by writing to the authors.

[2] Edward A. Duddy is professor of marketing in the School of Business of the University of Chicago and David A. Revzan is a research assistant in the same institution.

[3] Edward A. Duddy and David A. Revzan, *The Grain Supply Area of the Chicago Market*, "Studies in Business Administration," (Chicago: University of Chicago Press, 1934), Vol. IV, No. 4. See also "The Competitive Position of the Chicago Market in the Area of Grain Supply," *Journal of Farm Economics*, October, 1934.

to 1880, the next thirty-five years were marked by irregularly increasing shipments. Except for marked recovery in 1920 and 1921, corn shipments have declined steadily since 1914. Since 1930 from 28.7 to 51.7 million bushels of corn have moved out of the Chicago market annually.

Shipments of oats from Chicago have varied from 1.1 to 122.8 million bushels annually. Four general movements are apparent

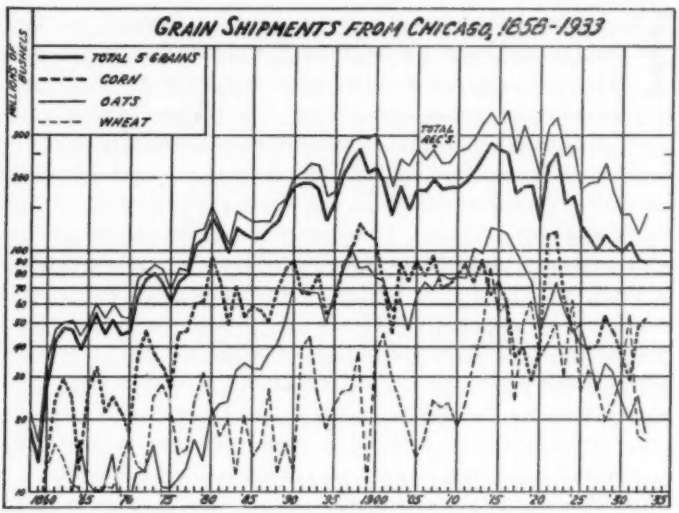

FIG. 1

in the fluctuations of oats shipments: (1) the period 1858–75 was marked by wide fluctuations in volume but saw some increase, particularly from 1858 to 1864; (2) from 1875 to 1897 the volume of shipments increased tenfold; (3) following a 50 per cent decline in volume from 1897 to 1904, the next ten years marked an offsetting increase; (4) since 1914, however, oats shipments have declined steadily and drastically, the volume in 1933 being over 90 per cent less than in 1914–15 and but slightly greater than the 1880 level.

The volume of wheat shipments since 1858 has fluctuated widely from year to year, varying from 7.2 to 85.5 million bushels an-

nually. From 1858 to 1880, despite marked annual fluctuations, the volume of shipments tripled. The following decade saw a 50 per cent decline in volume; but from 1890 to 1901 shipments increased by 100 per cent. Then followed a severe cyclical decline until 1905, after which wheat shipments increased rapidly until 1914, when an all-time peak six times the 1905 level was reached. Since 1914 the decline in volume of shipments has been steady, the 1933 level being less than one-fourth the 1914 peak.

Rye and barley shipments from Chicago are of much less importance than shipments of the three grains analyzed above. From 1858 to 1891 there was a marked rise in the volume of rye shipments from 8,000 to 7,600,000 bushels, the peak for the period. By 1910 this increase had been more than wiped out. The years following saw shipments increase again to 1924 only to have this increase disappear in the years after 1924. Barley shipments have varied from 132,000 to 13.4 million bushels annually. Four tendencies are apparent since 1858: (1) from 1858 to 1892 shipments increased a hundred fold; (2) the volume by 1902 was approximately one-third of the 1892 shipments; (3) in the years following 1902 up to 1919 the volume of shipments doubled; (4) since 1919 there have been drastic declines, the 1932–33 level being but one-tenth as large as the 1919 level.

Traditionally Chicago has been a forwarding market in contrast to Minneapolis and Kansas City, where large processing industries are present. Since 1924, with the exception of 1930–31, one-half or more of the total supply of all grains in the market[4] has been reshipped. From 1900 on, however, the general tendency has been toward shipping a smaller relative share of receipts. Total receipts have declined and along with them the per cent of receipts shipped out (Table I).

Further light is thrown upon this declining ratio of shipments to market supply by reference to the ratios reported for the separate grains. For wheat, a high ratio of shipments was reached during the war years, and in the early 1920's, when large exports

[4] "Total supply" available in the market is equal to the stocks in store at the beginning of a calendar year, plus receipts during the calendar year. July 1 has been taken arbitrarily as the beginning of the crop year for all grains.

moved to Europe to make up deficits created in the European supply by the war. In 1924, also, Europe had a short wheat crop while the crop in this country was very large. The drop in the ratio after 1924 is undoubtedly due to the failure of wheat exports. From 1929 to 1931, also, stocks of wheat were accumulating under the price-pegging arrangement of the Federal Farm Board.

Local wheat consumption (see Table II) increased in 1925–26, with expansion in flour milling. After 1928–29, however, the proportion of wheat supply used locally appears to have fallen con-

TABLE I*

PERCENTAGE OF GRAIN AVAILABLE FOR RESHIPMENT ACTUALLY RESHIPPED FROM CHICAGO, FIVE-YEAR AVERAGES, 1900–1933

Five-Year Periods	Wheat	Corn	Oats	Rye	Barley	Total Five Grains†
1900–1904	65.8	80.0	72.7	60.5	22.1	70.1
1905–9	64.2	77.7	78.1	56.0	31.2	71.6
1910–14	72.1	70.1	78.5	49.3	24.8	69.9
1915–19	71.3	53.3	71.4	72.5	34.3	63.6
1920–24	75.3	55.5	62.5	74.0	39.8	61.3
1925–29	60.2	43.1	62.1	33.5	32.5	50.5
1930–33†	59.9	52.4	75.1	36.9	28.5	56.6

* Data from annual reports of the Board of Trade of Chicago.
† Four-year average.

siderably.[5] Chicago is on an importing basis in terms of flour, but large quantities are reshipped to the East and the Southeast. From 1920 to 1933, 26–50 per cent of the supply of flour in the market was reshipped. Stocks of flour in Chicago warehouses are not adequately reported so that it is impossible to determine with any degree of accuracy the volume of local flour consumption. There was an apparent increase in consumption from 1924 to 1928, after which the decline in consumption appears to have been constant through 1933. This conforms to the changes in per

[5] For the years 1926 and 1929–33, inclusive, however, flour manufactured in the city in wheat equivalent appears to be above 100 per cent of the wheat reported as used locally. Wheat received directly at the mills from country elevators was recorded in the market receipts but stocks on hand in the mill elevators at the beginning and end of the year are not reported to the Board of Trade. The carry-over of these stocks accounts for the apparent excess of flour manufactured.

capita consumption of flour in the United States over the same period. A loss of population in Chicago of about 100,000 people between 1929 and 1933, as well as a declining per capita consumption, would account for most of the shrinkage.

Increased processing of corn in Chicago for corn products and for feed accounts for the striking decline in the corn-shipments

TABLE II*

RATIOS OF SHIPMENTS AND OF SUPPLY AVAILABLE FOR LOCAL CONSUMPTION AND PROCESSING TO THE TOTAL SUPPLY OF GRAIN IN THE MARKET, 1924–25—1932–33

	All Grains		Wheat		Corn		Oats		Barley		Rye	
	Ratio of Shipments to Total Supply	Ratio of Local Consumption to Total Supply	Ratio of Shipments to Total Supply	Ratio of Local Consumption to Total Supply	Ratio of Shipments to Total Supply	Ratio of Local Consumption to Total Supply	Ratio of Shipments to Total Supply	Ratio of Local Consumption to Total Supply	Ratio of Shipments to Total Supply	Ratio of Local Consumption to Total Supply	Ratio of Shipments to Total Supply	Ratio of Local Consumption to Total Supply
1924–25	63.7	27.5	83.1	13.0	44.5	47.2	71.5	16.9	33.4	65.0	64.0	9.8
1925–26	51.3	33.7	57.1	35.9	37.9	42.9	79.2	11.6	24.4	72.5	36.1	16.6
1926–27	56.9	31.9	71.4	24.4	45.2	38.5	73.0	18.5	38.3	61.2	51.9	44.6
1927–28	58.9	34.0	61.5	25.5	51.0	42.2	80.0	16.7	37.8	61.3	34.2	50.8
1928–29	52.8	33.8	34.5	23.6	50.3	44.2	79.1	15.3	53.5	42.7	16.4	28.9
1929–30	55.1	32.7	55.9	19.0	47.9	49.7	80.4	11.7	33.5	64.4	26.4	13.8
1930–31	46.8	34.6	42.2	13.8	40.3	55.1	64.0	33.8	38.3	49.1	58.0	13.7
1931–32	55.1	26.9	62.1	14.9	42.0	43.6	82.3	9.5	19.7	78.5	11.3	34.6
1932–33	53.9	29.1	50.2	30.2	53.6	32.5	76.4	9.5	14.2	69.6	15.5	18.0

* Owing to the fact that "receipts" and "shipments" as reported by the Chicago Board of Trade include through-billed cars, the foregoing ratios have been determined by using "inspections in" as a measure of receipts and transit shipments plus movement out by lake as a measure of shipments. The difference between the sum of the two ratios and 100 per cent represents the amount of a particular grain held in store, and afloat in harbor at the end of the year.

ratios. Since corn moves in heavier volume than any of the other grains, the decline here largely explains the drop in relative shipments for the total of all grains (Table I). After 1926, however, the shipments ratio increased. Processing continued to expand the demand for corn locally until 1930–31. Curtailment in processing was especially severe in 1932 and 1933, when the industrial demand for corn declined; shipments correspondingly increased (Table II).

There has been a rather constant decline in receipts of oats since

1922, accelerated to a degree in the last four years. As supplies have contracted, the relative amount reshipped has increased, except in 1930–31. This would indicate the existence of a rather constant demand in the East, with contraction of the amount used in the market locally.[6] The decline in the demand for processed feeds during the depression years may also help to account for the small ratio of local consumption and processing of oats. The year 1930–31 is a notable exception.

The irregularity of the rye-shipment ratios reflects the uncertainty of supply in the market. Declines in this ratio since 1925 are explained by the scarcity of receipts and the need of rye locally for grinding. The exceptionally high ratio of shipments in 1930–31 was the result of a speculative accumulation of stocks in the fall of 1929. As this is written, rye is being imported into Chicago in considerable quantities from abroad. Stocks of rye on hand at the end of the year are a larger proportion of total supply than for other grains (Table II).

Shipment ratios for barley are interesting in that they show a reverse tendency to those for other grains. While receipts have declined since 1900, the ratio of shipments increased until 1925. Evidently there was less local demand for barley for malting after the adoption of the prohibition amendment in January of 1919. From 1931–32 on, however, local consumption for malting and for mixing with other feed grains has increased while shipments have correspondingly declined. Failure of the export market has affected barley shipments.

The data[7] upon which this study is based make possible a de-

[6] Mr. Louis Sayre, of the Rosenbaum Grain Corporation, is authority for the statement that before the operation of the Grain Standards Act in 1916 a large volume of a mixture of oats and barley, classed as oats, moved out of Chicago for feed. This would account for the very high ratio of oats shipments in the early part of the period and likewise for the low ratio of barley shipments.

[7] Data of shipments by rail are from the records of cars of grain registered for transit with the Central Weighing and Inspection Bureau. Data of shipments by lake and their destinations are from the records of L. C. West, statistician of the Chicago Board of Trade. Data of total shipments by lake and rail as reported in this study do not correspond to shipments as shown in the annual reports of the Chicago Board of Trade. Shipments as reported by the Board of Trade are based on cars loaded out of the market by rail or in cargo lots by water without reference to whether the grain was registered for transit. Thus transit grain may, during a twelve months' period, be greater or less than the total amount reported loaded out by rail.

termination of the geographical destinations of grain shipments from Chicago, and thus a relatively accurate description of the distribution area of the market. This movement out of the market is considered with reference to shipments both by water and by rail and whether for domestic use or for export.

THE DISTRIBUTION AREA OF THE CHICAGO MARKET

When the combined shipments of five grains from Chicago since 1924 (on a fiscal year basis) are averaged, it is found that this market shipped the equivalent of 64,685 cars each year (Table III). Nearly one-half of this amount, 48.9 per cent, moved by lake to 30 ports; 17.4 per cent went to Canadian ports. Rail shipments for domestic consumption accounted for 46.8 per cent of the total shipments, 3.29 per cent going to Canada; while rail shipments to 18 ports for export accounted for the balance, 4.2 per cent.

Two-fifths of all grain shipped from Chicago was corn; 29.2 per cent wheat; 23.8 per cent oats; 2.7 per cent barley; and 3.1 per cent rye. These percentages are based on the record of grain registered for transit.[8]

Lake shipments are not eligible for the transit rate. Again the transit privilege may expire on grain held in an elevator beyond the allowed period without any movement of the grain out of the market.

A check of the data of grain registered for transit against the shipments data of the Board of Trade report for the nine-year period shows the following ratios of transit grain to railroad reported shipments: wheat, 83.5; corn, 97.4; oats, 106.2; rye, 90.6; and barley, 87.2. Carry-over of oats eligible for transit explains the fact that transit shipments in certain years exceeded rail shipments.

A further reason for failure of the two records to check is the fact that the Board of Trade data of rail receipts and shipments include, together with the cars actually unloaded and reloaded at the market, through-billed and reconsigned cars which merely pass through Chicago. The inclusion of such cars tends to inflate the volume of reported receipts and shipments. For an estimate of the volume of through-billed cars see *Report of the Federal Trade Commission on the Grain Trade*, II, 19.

Shipments are shown in car-lots, bushels being converted to cars on the basis of the average contents of cars of each grain received in each year as reported by the Board of Trade weigh-master. For the period considered, the average contents of a car of wheat was 1,444 bushels; corn, 1,517 bushels; oats, 2,113 bushels; barley, 1,596 bushels; and rye, 1,463 bushels.

[8] Data of the *Annual Report of the Board of Trade* show the following proportions over the same period: corn, 37.1 per cent; wheat, 28.7 per cent; oats, 28.5 per cent; barley, 2.9 per cent; and rye, 2.9 per cent. The greatest variation between the two records was in the case of corn and oats.

Shipments by lake.—Of the 30 ports receiving grain shipments from Chicago by lake, 17 were located in Canada and 13 in the

TABLE III

AVERAGE ANNUAL CAR-LOT SHIPMENTS OF FIVE GRAINS FROM CHICAGO, BY DESTINATIONS, JULY, 1924—JUNE, 1933

Destinations	Number	Per Cent
By rail—for domestic consumption:		
Central Freight Association	7,929	12.26
Trunk Line Freight Association	11,845	18.31
New England Freight Association	4,180	6.46
Canadian Freight Association	2,130	3.29
Southern Freight Association	2,997	4.63
Illinois-Western Association	1,206	1.87
Total	30,287	46.82
By rail—for export:		
Baltimore, Md.	1,055	1.63
New York, N.Y.	739	1.14
All others*	950	1.47
Total	2,744	4.24
By lake—for domestic consumption or export:		
Buffalo, N.Y.	17,044	26.35
Cardinal, Ontario	445	.69
Collingwood, Ontario	995	1.54
Depot Harbor, Ontario	2,441	3.77
Midland, Ontario	634	.98
Montreal, Quebec	2,651	4.10
Ogdensburg, N.Y.	561	.87
Owen Sound, Ontario	728	1.13
Port Colborne, Ontario	689	1.07
Port McNicoll, Ontario	501	.77
Tiffin, Ontario	2,805	4.34
Toledo, Ohio	549	.85
All others†	1,611	2.48
Total	31,654	48.94
Grand total	64,685	100.00

* All others—Boston, Mass.; Galveston, Tex.; Halifax, Nova Scotia; Hampton Roads, Va.; Key West, Fla.; Mobile, Ala.; Montreal, Quebec; New Orleans, La.; Newport News, Va.; Norfolk, Va.; Petersburg, Ontario; Philadelphia, Pa.; Portland, Me.; St. John, New Brunswick; Undercliff, N.J.; and Weehawken, N.J.

† All others—Baltimore, Md.; Duluth, Minn.; Erie, Pa.; Fairport, Ohio; Gladstone, Mich.; Goderich, Ontario; Halifax, Nova Scotia; Kingston, Ontario; Milwaukee, Wis.; New York, N.Y.; Oswego, N.Y.; Philadelphia, Pa.; Port Huron, Mich.; Quebec, Quebec; Sarnia, Ontario; Sorel, Quebec; Toronto, Ontario; and Walkerville, Ontario.

United States. Most important of the 30 ports was Buffalo, which received an average of 17,044 cars a year, 26.4 per cent of the total

shipments from Chicago. Buffalo is the eastern terminus of transportation on the Great Lakes and is a major processing and distributing center for New York and New England. The relative importance of the remaining ports may be noted in Table III.

When the lake shipments are grouped according to whether the destinations were on the Great Lakes or on the Atlantic Ocean, and whether the ports were in Canada or in the United States, Table IV shows the distribution for the nine-year period. It is read-

TABLE IV

	Receipts from Chicago Cars
Lake ports in the United States	18,862
Lake ports in Canada	10,004
Atlantic ports in Canada	2,726
Atlantic ports in the United States	62
Total	31,654

ily apparent that the lake ports received over ten times as many cars of grain moving by water from Chicago as did the Atlantic ports, and that the lake ports in the United States received approximately 85 per cent more grain from Chicago than did the Canadian lake ports.

Data published by the Chicago Board of Trade indicate that from 2.2 to 22.5 per cent of the total lake shipments, 1,467,000–16,664,000 bushels, were for export (Table V).

Rail shipments for domestic consumption.—Shipments of grain by rail for domestic consumption are distributed among six groups of destinations: (1) Central Freight Association Territory; (2) Trunk Line Territory; (3) New England Territory; (4) Canadian Territory; (5) Southern Territory; and (6) Illinois and Western Territory. These are territorial divisions based on freight-rate systems (see Fig. 2).

Trunk Line Territory is the most important destination for grain moving out of Chicago by rail for domestic consumption. This territory received an average of 11,845 cars annually, 18.3 per cent of the total Chicago shipments. The Central Freight Association received 7,929 cars, 12.3 per cent of the total shipments.

TABLE V*

PERCENTAGE OF TOTAL LAKE SHIPMENTS FROM CHICAGO EXPORTED

(Bushels—000 omitted)

GRAIN	1924		1925		1926		1927		1928		1929		1930		1931		1932		1933	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Barley	.....	.....	54	42.5	.....	.....	.....	.....	1,538	86.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Corn	650	4.4	504	3.3	1,776	9.9	1,335	6.6	1,932	12.8	2,071	13.1	673	4.5	910	5.8	4,823	11.9	2,667	9.2
Oats	.....	.....	3,362	25.3	.....	.....	482	8.4	1,495	22.6	145	1.7	.....	.....	.....	.....	431	2.7	.....	.....
Rye	835	24.4	312	10.2	748	54.2	548	39.5	280	36.6	272	70.1	.....	.....	.....	.....	313	38.1	.....	.....
Wheat	15,179	31.8	2,428	24.5	6,048	29.9	7,588	39.8	.....	.....	829	8.0	1,157	7.5	557	1.3	.....	.....	.....	.....
Total	16,664	22.5	6,660	15.9	8,572	17.1	9,953	21.4	5,245	18.3	3,317	9.4	1,830	4.6	1,467	2.2	5,567	8.8	2,667	5.2

* These are estimates published in the annual reports of the Chicago Board of Trade. Final disposition of grain billed for export from Chicago is not known.

New England Territory received an average of 4,180 cars annually, 6.5 per cent of the total, while the Southern Territory received 2,997 cars, equivalent to 4.6 per cent of the total. Shipments to Canadian Territory amounted to 2,130 cars annually, 3.3 per cent of all shipments. Illinois and Western Territory was the least important of all destinations, receiving an average of 1,206 cars annually, 1.9 per cent of the total shipments (see Table III).[9]

FIG. 2.—Carlot distribution of five grains by rail to freight-rate territories, average 1924–25 to 1932–33.

Rail shipments for export.—Although 18 ports received grain from Chicago for export purposes, but 2 of these ports, Baltimore and New York City, received more than 1 per cent of Chicago's total shipments. The former received an average of 1,055 cars annually, 1.6 per cent of the total, while New York City received an average of 739 cars, 1.1 per cent of the total. None of the remaining ports received as much as 1 per cent of the total shipments (see Table III).

From the foregoing analysis it will be noticed that Chicago sent 57 per cent of its total shipments to three destinations: Buffalo, New York; Trunk Line Territory; and Central Freight Associa-

[9] For a report of rail shipments of grain from Chicago to destination territories in 1923 see *Transportation on the Great Lakes* (Washington: Board of Engineers for Rivers and Harbors, War Department, 1926), p. 124.

tion Territory. It must be remembered, however, that the two territories mentioned conceal a great number of individual destinations and are not therefore directly comparable with the lake ports. An average of 15.0 per cent of total shipments went into export by rail or via lake.

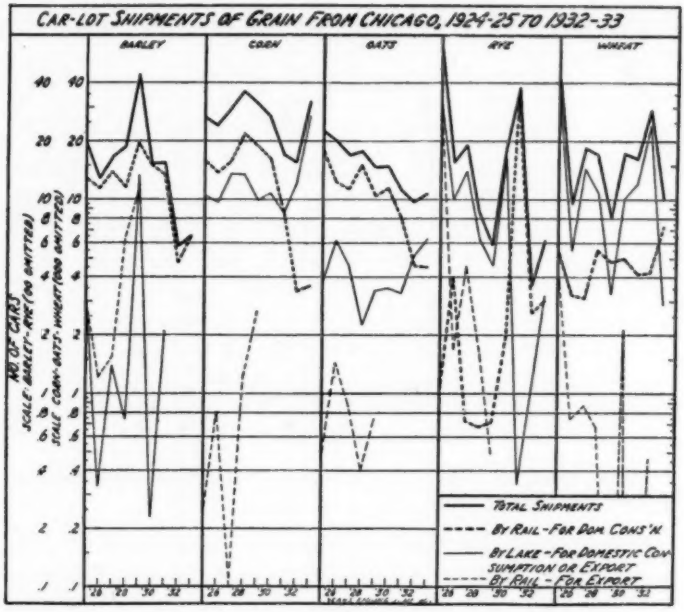

FIG. 3

THE DISTRIBUTION AREA FOR BARLEY

Car-lot shipments of barley from Chicago since 1924–25 have varied from 583 to 4,434 cars annually (see Fig. 3). By far the greater proportion was shipped by rail for domestic consumption. This type of movement accounted for from 482 to 1,964 cars annually, 44.3–100 per cent of the total barley shipments; the average for the nine years was 1,209 cars, 70.1 per cent of the total. The movement by rail for export accounted for from 2 to 1,137 cars annually, and from 0.13 to 34.6 per cent of the total move-

ment. There have been no shipments for export since 1929–30. On an average basis for nine years, this movement amounted to 263 cars, 15.3 per cent of the total movement. From 23 to 1,333 cars moved annually by lake, equivalent to 1.5 to 30.1 per cent of the total. There were no shipments of barley by lake in 1932–33. Over the nine-year period the lake shipments averaged 253 cars, 14.7 per cent of the total movement.

Shipments by rail for domestic consumption.—By far the greater part of barley shipments by rail went to destinations in Trunk Line Territory. This territory received from 248 to 1,145 cars annually, and 25.8 to 54.7 per cent of the total barley shipments. Data available since 1927–28 indicate that from 1 to 7 per cent of the total shipments to Trunk Line Territory moved to the Atlantic ports. The Central Freight Association ranked second, receiving from 87 to 422 cars from Chicago annually, and from 6.4 to 27.6 per cent of the total shipments. Chicago shipped from 17 to 335 cars annually to the New England Territory, 2.9–14.4 per cent of the total shipments. From 10 to 329 cars and from 0.77 to 21.3 per cent of the total shipments went to Southern Territory. Illinois and Western Territory took 36–120 cars and 1.7–20.6 per cent of the total shipments.

Generally, shipments by rail for domestic consumption increased in volume up to 1928–29 but have since suffered a drastic decline. Relative to total shipments, however, there has been a tendency for this type of movement to increase in importance, all of the barley moving from Chicago in 1932–33 being of this type of shipment. The Southern, Illinois and Western territories have tended to profit more, relatively, than have the other territories.

Shipments by rail for export.—Barley moving from Chicago for export was billed to 9 ports. The most important, New York City, received from 98 to 399 cars and from 7.5 to 20.7 per cent of the total shipments. Since 1928–29, however, there have been no shipments to this port. Baltimore was the only other port to receive more than 1 per cent of Chicago's total barley shipments each year. From 3 to 473 cars and from 0.23 to 13.0 per cent of the total shipments were destined to this port. As was the case for New York City, no barley shipments have been consigned to

this port since 1928–29. Philadelphia received 0.99 per cent of the total shipments—on the average, 17 cars of barley per year. Two other ports, Norfolk and New Orleans, received small annual shipments.

After reaching a peak of importance in 1928–29 as far as physical volume was concerned, this type of movement has disappeared entirely, coincident with the disappearance of the greater part of our foreign trade. It was in 1928–29 that a controversy arose with German importers over barley blight on barley from the United States.

Shipments by lake.—Barley shipments from Chicago by lake went to 5 ports: Buffalo, New York; Depot Harbor, Midland, and Port Colborne, Ontario; and Montreal, Quebec. All of these, with the exception of Midland, received more than 1 per cent of the total barley shipments. Montreal, the most important of these ports, received shipments of barley in two years, 1925–26 and 1928–29, amounting to 33 and 948 cars, respectively, or 2.6 and 21.4 per cent of the total shipments. Buffalo received shipments in five years varying from 39 to 360 cars and from 0.88 to 13.6 per cent of the total shipments. There were no consignments to this port in 1925–26, 1926–27, 1929–30, or 1932–33. Depot Harbor, Port Colborne, and Midland received from 21 to 157 cars annually at irregular intervals from 1926–27 to 1929–30.

This type of movement has tended to decrease in importance over the period, owing in part to the disappearance of the foreign market for grain. In 1924, 42.5 per cent of the total lake shipments, or 54,000 bushels, were for export purposes; in 1928, 1,538,000 bushels, 86.4 per cent of the total, were for export (Table V).

THE DISTRIBUTION AREA FOR CORN

Shipments of corn from Chicago in car-lot quantities since 1924–25 have varied from 15,694 to 36,355 cars (see Fig. 3). The volume of shipments decreased by approximately 40 per cent from 1924–25 to 1931–32, but recovered sharply in 1932–33. Shipments by rail for domestic consumption averaged 13,076 cars, 49 per cent of the total. Lake shipments were for all practical purposes as important, with 13,047 cars, or 48.9 per cent of the total

shipments. The remainder, 564 cars, or 2.1 per cent of the total, moved by rail for export. This type of movement was important only from 1924–25 to 1928–29.

Shipments by rail for domestic consumption.—Shipments varied from 3,412 to 21,659 cars annually, and from 11.2 to 60.1 per cent of the total. After reaching a peak in 1927–28, this type of shipment has declined rapidly, the volume in 1932–33 being but one-sixth of the 1927–28 peak. The most important destination was Trunk Line Territory, which received 471–8,638 cars of corn annually, and from 3 to 28.4 per cent of the total shipments. Over the nine-year period the average was 4,946 cars and 18.5 per cent. Through 1929–30 shipments to this territory by rail increased in relative importance only to decline sharply after this date. Corn destined to Trunk Line Territory went east mostly by water to Buffalo after 1929–30. Data available since 1927–28 indicate that 1–17 per cent of the shipments to this territory were consigned to the Atlantic ports.

Central Freight Association Territory received 1,214–6,953 cars annually, and from 4.8 to 19.1 per cent of the total shipments. The nine-year average was 3,695 cars and 13.9 per cent. Shipments to this territory fell off sharply after 1930–31. Canadian Territory points received 337–3,491 cars annually, and from 1.05 to 12.0 per cent of the total shipments, averaging for the period 1,868 cars and 7 per cent of the total shipments. After 1926–27 movement of corn into Canada declined to the low point in 1932–33. Destinations in the New England Territory received 50–2,847 cars annually, and from 0.16 to 9.4 per cent of the total shipments. The Southern Territory received 36 to 1,420 cars annually and 0.11–4.5 per cent of the total shipments. Like the rail movement to other territories, shipments to New England were adversely affected by transportation costs which were relatively much higher after the drop in prices in 1930–31. From 30 to 1,193 cars of corn were shipped from Chicago to Illinois and Western Territory, varying from 0.17 to 6.7 per cent of the total shipments. These latter territories have tended to diminish in importance over the nine years analyzed.

Shipments by lake.—Shipments of corn from Chicago moving by

lake were destined to 23 ports—15 in Canada and 8 in the United States. Six ports—Buffalo, Cardinal, Collingwood, Depot Harbor, Owen Sound, and Tiffin—received shipments over the entire nine-year period. Kingston, Midland, Montreal, Ogdensburg, and Port McNicoll received significant quantities during several of the nine years analyzed. From 504,000 to 4,823,000 bushels of corn and from 3.3 to 13.0 per cent of the total lake shipments from Chicago were for export (Table V).

Total shipments by lake varied from 8,523 to 28,433 cars annually, and from 31.5 to 88.8 per cent of the total shipments. From 1924–25 to 1930–31 there was a slight decline in the physical volume of shipments, but since 1930–31 lake shipments have more than tripled. This increase in lake relative to all-rail shipment may be attributed to the greater relative burden of an inflexible rail rate on a sharply declining corn price. Lake cargo rates adjusted themselves more readily to the lower corn prices.[10]

Buffalo was the most important of the lake ports receiving corn from Chicago. On the average this port received 6,378 cars, or 23.9 per cent of the total shipments. During the nine years, shipments varied from 3,935 to 16,650 cars annually, and from 14.6 to 52 per cent of the total shipments. Tiffin, Ontario, ranked second, receiving 725–3,774 cars and 3.1–14 per cent of the total shipments each year, with an average for the period of 2,097 cars and 7.9 per cent. Other Canadian lake ports which were important destinations for American corn were Depot Harbor, with an average of 962 cars; Collingwood, with 735 cars; Owen Sound, with 448 cars; Cardinal, with 442 cars; Port McNicoll, with 345 cars. Ogdensburg, New York, received shipments from Chicago in 1924–25, 1925–26, 1931–32, and 1932–33, varying from 498 to 1,466 cars and from 2.1 to 8.6 per cent of the total shipments. For the nine-year period, however, the average was but 504 cars, 1.9 per cent of the total shipments. Of the 15 remaining ports receiving corn from Chicago, 12 received from 0.10 to 0.87 per cent of the total shipments, respectively. All the lake ports, with the exception of Depot Harbor, show an increase in relative importance during the period 1924–25 to 1932–33.

[10] The ratio of the all-rail rate on corn to the lake-rail rate rose from 123 in 1927–31 to 161 in 1932–33 (see *The Grain Supply Area of the Chicago Market*, p. 7).

Shipments by rail for export.—From 1924–25 to 1928–29 Chicago shipped 110–2,663 cars and 0.37–8.4 per cent of its total shipments of corn by rail to 12 ports for export purposes. Since 1928–29 there has been no movement into export of any importance, 8 cars being shipped in 1929–30, 3 cars in 1931–32, and 1 car in 1932–33. On the basis of a nine-year average, no port has received as much as one-half of 1 per cent of Chicago's total shipments. In 1928–29, however, 2.7 per cent went to Baltimore, 1.3 per cent to New York City, 1.2 per cent to St. John's (New Brunswick), 1 per cent to Philadelphia, 0.93 per cent to Norfolk, and 0.85 per cent to Newport News.

THE DISTRIBUTION AREA FOR OATS

Chicago shipped 9,774–22,653 cars of oats annually (see Fig. 3). On an average basis, 10,671 cars, or 69.3 per cent of the total movement, were shipped by rail for domestic consumption; 4,281 cars, or 27.8 per cent of the total, by lake for domestic consumption or export; and 445 cars, or 2.9 per cent, by rail for export. There has been a steady decline in the total shipments of oats, the volume in 1932–33 being but 50 per cent of the 1924–25 volume. After 1930–31 shipments by rail contracted, while the movement by lake increased from 30 to over 50 per cent of total shipments. The reason for this was the very favorable ratio of lake-rail to all-rail rates.

Shipments by rail for domestic consumption.—Annual shipments by rail for domestic use varied from 4,488 to 18,364 cars and from 41.7 to 84.9 per cent of the total shipments from Chicago. On an average, 5,104 cars, or 33.2 per cent of the total shipments, were consigned to Trunk Line Territory. During the nine years, however, shipments to this territory varied from 2,151 to 7,364 cars and from 22 to 41.2 per cent of the total shipments. While rail movement to Trunk Line Territory declined sharply after 1929–30, the increase in lake shipments to Buffalo more than made good the loss into the territory by rail. Based on data available since 1927–28, from 4 to 11 per cent of the total shipments to this territory moved directly to Atlantic ports.

From 443 to 5,155 cars and from 4.1 to 22.8 per cent of the total

went to New England Territory each year, with an average for the period of 2,446 cars and 15.9 per cent. Destinations in the Central Freight Association Territory received from 760 to 2,348 cars and from 5.2 to 13.4 per cent of the total shipments annually. The Southern Territory received 33–3,880 cars and 0.34–17.1 per cent of the total shipments. Shipments to New England declined abruptly after 1929–30, and to Central Freight and Southern territories after 1930–31. Oats shipments to Canadian Territory varied annually from 12 to 498 cars and from 0.10 to 4.0 per cent of the total shipments. Illinois and Western Territory points received annually 37–344 cars and 0.25–2.5 per cent of the total shipments.

Shipments by lake.—Seventeen lake ports, 11 in Canada and 6 in the United States, received shipments of oats from Chicago, varying from 2,269 to 6,268 cars and from 12.8 to 58.2 per cent of the total shipments. Buffalo received annually 702–3,545 cars and 5.5–32.9 per cent of the total shipments. Buffalo receipts increased sharply after 1930–31. Depot Harbor received 206–2,129 cars and from 1.2 to 10.6 per cent of the total shipments. Shipments to Tiffin varied from 254 to 855 cars and from 2 to 5.5 per cent of the total shipments; this port, however, received no oats from Chicago in 1924–25 and 1932–33. Toledo has been a receiving port for oats from Chicago since 1929–30, receiving 195–1,533 cars and 1.8–15.7 per cent of the total annual shipments. Shipments to this port helped to make up the decline in rail movement into Central Freight Territory after 1929–30. Montreal received oats from Chicago during six of the nine years, varying from 38 to 936 cars and from 0.17 to 5.6 per cent of the total shipments. Shipments to Owen Sound, Ontario, varied from 27 cars in 1930–31 to 732 cars in 1932–33. All ports except Depot Harbor increased in relative importance as receivers of oats from Chicago from 1924–25 to 1932–33.

Lake shipments of oats in five years—1925, 1927, 1928, 1929, and 1932—were destined for export purposes, varying from 1.7 to 25.3 per cent of the total lake shipments (Table V).

Shipments by rail for export.—Twelve ports, of which 3 were located in Canada, received annual shipments of oats from Chicago varying from 7 to 1,440 cars and from less than one-tenth of

1 per cent to 7.2 per cent of the total shipments. New York City was the only port to receive more than 1 per cent of the total annual shipments. This port received from 3 to 1,111 cars annually and from less than one-tenth of 1 per cent to 5.6 per cent of the total shipments. Over three-fourths of the rail movement for export purposes is accounted for by the movement to New York City. This movement disappeared after 1928–29.

THE DISTRIBUTION AREA FOR RYE

Shipments of rye have fluctuated widely between limits of 362 and 6,671 cars each year, but there has been a downward tendency, the 1932–33 shipments being but 10 per cent of the 1924–25 volume (see Fig. 3). Shipments by lake have averaged 983 cars and 48.7 per cent of the total shipments. Rail shipments for domestic consumption averaged 577 cars, 28.6 per cent of the total shipments, while shipments by rail for export averaged 460 cars and 22.8 per cent of the total shipments.

Shipments by lake.—Chicago shipped rye to 10 lake ports, although some received shipments in but one or two years. Total shipments by lake varied from 34 to 3,273 cars annually and from 0.9 to 89.1 per cent of the total shipments. From 1924 through 1929 and in 1932, 10.2–70.1 per cent of the total lake shipments were for export (Table V).

Buffalo received 34–2,452 cars annually and 0.9–57.6 per cent of the total shipments. Although ranking first in receipts, this port did not receive any rye from Chicago in 1930–32. Montreal received rye from Chicago from 1924–25 to 1929–30 and again in 1931–32. These shipments varied from 31 to 582 cars and from 1.7 to 30.2 per cent of the total shipments. Other Canadian ports receiving important shipments were Depot Harbor, Owen Sound, Port Colborne, Collingwood, Midland, Port McNicoll, and Goderich. The Canadian ports as a group accounted for 19 per cent of total rye shipments over the whole period. Shipments to all lake ports decreased nearly one hundred times from 1924–25 to 1930–31, but have since recovered in relative importance.

Shipments by rail for domestic consumption.—From 67 to 3,738 cars were shipped to destinations by rail for domestic purposes, amounting to 1.5–99.1 per cent of the total shipments. An average

for the period shows 28.6 per cent of total shipments in this type of movement. Illinois and Western Territory received 1–40 cars annually with the exception of 1930–31; in that year, 2,079 cars, 55 per cent of the total shipments, went to destinations in that territory.[11] Central Freight Association Territory received from 1 to 925 cars and from 0.10 to 28.5 per cent of the total shipments. Southern Territory received 6–459 cars and 0.19–31.5 per cent of the total annual shipments, except in 1926–27, when no rye shipments were consigned to destinations in this territory. Chicago shipped 3–273 cars and 0.12–10.8 per cent of its total shipments annually to Trunk Line Territory. A few shipments to this territory from 1927–28 to 1932–33 were consigned to Atlantic ports. Minor quantities of rye were shipped to New England and Canadian territories.

There was a marked increase in the movement by rail for domestic use up to 1930–31, with an accompanying increase in relative importance. Since 1930–31, however, this type of movement has tended to lose in importance to lake shipments. All territories, excepting Central Freight Association and Trunk Line, follow this trend. The latter two show steady increases in relative importance over the whole period.

Shipments by rail for export.—This type of movement was present from 1924–25 to 1929–30, varying annually from 5 to 3,301 cars and from 0.27 to 49.5 per cent of the total shipments. Although 9 ports received these shipments, but 2 were of any importance. Baltimore received shipments ranging from 1 to 3,277 cars and from 0.17 to 49.1 per cent of the total shipments. New York City received 3–278 cars and 0.27–14.4 per cent of the total shipments. The disappearance of the greater part of our foreign trade has, of necessity, wiped out this type of movement since 1929–30, and the market is now on an importing basis.

THE DISTRIBUTION AREA FOR WHEAT

The period 1924–25 to 1932–33 saw an average of 18,856 cars of wheat shipped annually from Chicago, with a range of 8,113–43,968 cars (see Fig. 3). More than two-thirds of this movement

[11] In December, 1929, an eastern syndicate took delivery of all available rye, on December future contracts. In the effort to distribute the large stocks much rye went to downstate Illinois points which were not usually in the market.

on the average, 13,090 cars, or 69.4 per cent of the total, was shipped by lake. Approximately one-fourth (25.2 per cent), 4,754 cars, was shipped by rail for domestic consumption. The remainder, 1,012 cars, or 5.4 per cent of the total, was shipped by rail for export.[12] After an 80 per cent decline in volume from 1924–25 to 1925–26, there has been no definite tendency apparent in the trend of total wheat shipments from Chicago.

Shipments by lake.—Although lake shipments went to 22 ports, but 2 of these, Buffalo and Montreal, received shipments steadily during the greater part of the period studied. Shipments to Buffalo varied from 2,697 to 21,237 cars and from 26.7 to 50.9 per cent of the total shipments. Montreal received shipments from Chicago from 1924–25 to 1930–31, ranging from 36 to 6,414 cars and from 0.44 to 28.3 per cent of the total shipments. Other ports receiving from 1 up to 6 per cent of average total shipments were Port Colborne, Depot Harbor, Midland, and Tiffin in Ontario, and Erie, Pennsylvania. Toledo, Sarnia, Fairport, Owen Sound, and Goderich received shipments during single years, each of which averaged from one-half to 1 per cent of the average annual shipments for the period. Except in 1928, 1932, and 1933, 557,000–15,179,000 bushels of wheat moved from Chicago for export, varying from 1.3 to 39.8 per cent of the total shipments by lake (Table V).

This type of movement maintained its relative importance until 1932–33. In this year shipments were entirely by rail to destinations within the United States. Elevator space at the lake ports was too congested to receive more grain. Total shipments were greatly curtailed in this year. Because of the congestion of elevator space at the ports, the very favorable ratio of lake-rail to all-rail rates failed to stimulate lake tonnage.

Shipments by rail for domestic consumption.—Shipments of wheat for domestic use varied from 3,103 to 7,240 cars annually and from 12.5 to 71.7 per cent of the total shipments. There was a gradual increase in the volume of these shipments from 1924–25 to 1932–33, but rather wide variations in their relative importance, the peak of importance being reached in 1932–33, when lake ship-

[12] Approximately 19.1 per cent of total annual shipments of wheat were exported during the period considered.

ments were at a low point. Only in one other year, 1928–29, did shipments by rail for domestic consumption exceed lake shipments. In both years total shipments were unusually small.

The Central Freight Association Territory ranked first, receiving 1,050–3,590 cars annually, and 5.3–35.5 per cent of the total shipments, with an average for the period of 2,424 cars and 13.9 per cent. Trunk Line Territory received from 385 to 1,871 cars and from 2.4 to 18.5 per cent of the total shipments, the average being 1,080 cars and 5.7 per cent. Atlantic ports in this territory received from 1.4 to 4.4 per cent of the total shipments since 1927–28.[13] Shipments to destinations in Southern Territory ranged from 317 to 1,708 cars and from 1.7 to 16.9 per cent of the total shipments. Illinois and Western Territory received 30–531 cars annually and from 0.23 to 3.1 per cent of the total shipments. Of the four important territories, all but the Illinois and Western registered increases in physical volume and relative importance in 1928–29 and 1932–33, when lake shipments declined drastically.

Shipments by rail for export.—This type of movement was important from 1924–25 to 1927–28 and again in 1929–30 and 1931–32, ranging from 458 to 4,232 cars annually and from 1.6 to 12.3 per cent of the total shipments. Rail shipments for export show no definite trend, tending mainly to supplement other shipments and disappearing almost entirely after 1929, when the foreign trade of the United States in wheat was drastically reduced.

Baltimore received shipments from 1924–25 to 1927–28 and again in 1929–30, ranging from 102 to 2,845 cars and from 0.55 to 6.5 per cent of the total shipments. In the same years shipments ranging from 91 to 576 cars and from 0.49 to 3.3 per cent of the total were sent to New Orleans. Wheat from Chicago was shipped to Philadelphia from 1924–25 to 1927–28, in 1929–30, and in 1931–32. These shipments ranged from 16 to 676 cars and from 0.10 to 1.5 per cent of the total. Nine ports received shipments in single years, varying from 1 car for St. John, New Brunswick, in 1924–25 to 613 cars for Newport News in 1929–30.

[13] If lake shipments to Buffalo are added to those going to Trunk Line Territory by rail, this territory much exceeds Central Freight as a destination of wheat shipments from Chicago.

THE DISTRIBUTION AREA FOR GRAIN PRODUCTS

A very large part of the grain processed locally is shipped out in the form of flour and other grain products. The relative importance of grain processed locally was shown in Table II. How these products are distributed to destination areas is shown in Table VI.

Less than 2 per cent of the total shipments of from 26,000 to 37,000 cars moved by rail for export. Trunk Line Territory, including the Atlantic ports, took almost half the total rail shipments over the nine-year period. The volume moving to this territory, however, declined from 57.3 per cent of the total (18,641 cars) in 1924–25 to 36.6 per cent (12,962 cars) in 1929–30. Since the latter date shipments increased to 39.6 per cent (10,334 cars) in 1932–33.

Shipments to Central Freight Association Territory increased as shipments to Trunk Line Territory declined. Starting with 26.0 per cent of the total (8,470 cars) in 1924–25, this area increased its share to 46.7 per cent of the total (16,569 cars) in 1929–30. Then as shipments to Trunk Line Territory increased, the movement to Central Freight Territory decreased from the high point of 46.7 to 36.6 per cent (9,562 cars) in 1932–33.

New England Territory ranked third in importance, but shipments to this area have declined from 10.2 per cent of the total (3,322 cars) at the beginning of the period to 4.5 per cent (1,597 cars) in 1929–30, with the same tendency to increase after this date as shown by Central Freight Association Territory. New England at the end of the period took 7.7 per cent (2,011 cars) of total shipments.

The Gulf Ports and Southern Territory took an average of about 5 per cent of total shipments and there was little variation from this proportion over the period. Closely approximating Southern Territory was Illinois and Western, with from 2.8 to 8.6 per cent of the total. In the last two years of the period shipments to this territory show definite signs of increase. Shipments to Canada were negligible.

On the whole, shipments of manufactured grain products show a much higher degree of stability than do shipments of grain. This is rather to be expected because the very diversity of these prod-

TABLE VI

RAIL CAR-LOT SHIPMENTS OF GRAIN PRODUCTS REGISTERED FOR TRANSIT FROM CHICAGO, 1924–25 TO 1932–33

DESTINATIONS	1924–25		1925–26		1926–27		1927–28		1928–29		1929–30		1930–31		1931–32		1932–33		AVERAGE 1924–25 TO 1932–33	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
By rail—for domestic consumption:																				
Central Freight Territory	8,470	26.04	8,621	25.15	10,406	30.48	13,851	36.81	14,402	40.40	16,569	46.74	13,537	44.77	9,722	37.27	9,562	36.63	11,682	36.00
Trunk Line Territory	18,641	57.32	19,726	57.55	17,721	51.91	17,692	47.02	15,759	44.21	14,056	39.66	12,376	40.93	10,580	40.56	11,717	44.89	15,363	47.34
New England Territory	3,322	10.21	2,975	8.68	2,424	7.10	2,421	6.43	1,820	5.11	1,597	4.51	1,383	4.57	1,849	7.09	2,011	7.70	2,200	6.78
Canadian Territory	10	†	4	†	12	†	12	†	15	†	23	†	38	.13	11	†	13	†	16	†
Southern Territory	1,171	3.60	1,832	5.34	1,767	5.18	2,008	5.34	1,795	5.04	1,479	4.17	1,597	5.29	1,466	5.62	1,095	4.19	1,579	4.87
Illinois Western Territory	907	2.79	1,121	3.27	1,205	3.53	1,235	3.28	1,195	3.35	1,356	3.83	1,038	3.43	2,257	8.65	1,620	6.21	1,326	4.09
Totals	32,521	100	34,279	100	33,535	98.24	37,219	98.91	34,986	98.15	35,080	98.96	29,969	99.12	25,885	99.24	26,018	99.67	32,166	99.11
By rail—for export:																				
Baltimore, Md.	.....	.....	.....	.....	98	.29	19	†	90	.25	56	.16	30	.10	16	†	11	†	35	.11
Key West, Fla.	.....	.....	.....	.....	113	.33	132	.35	127	.36	82	.23	38	.13	18	†	.....	.....	57	.18
New Orleans, La.	.....	.....	.....	.....	58	.17	46	.12	79	.22	61	.17	97	.32	79	.30	47	.18	52	.16
New York, N.Y.	.....	.....	.....	.....	245	.72	194	.52	325	.91	151	.43	45	.15	22	†	14	†	111	.34
All others*	.....	.....	.....	.....	86	.25	18	†	38	.11	19	†	57	.18	64	.25	15	†	33	.10
Totals	.....	.....	.....	.....	600	1.76	409	1.09	659	1.85	369	1.04	267	.88	199	.76	87	.33	288	.89
Grand totals	32,521	100	34,279	100	34,135	100	37,628	100	35,645	100	35,449	100	30,236	100	26,084	100	26,105	100	32,454	100

* All others—Boston, Mass.; Edgewater, N.J.; Havana, Cuba; Hoboken, N.J.; Jersey City, N.J.; Montreal, Quebec; Newport News and Norfolk, Va.; Philadelphia, Pa.; Weehawken, N.J.; West St. John, New Brunswick.

† Less than one-tenth of 1 per cent.

ucts serves to sustain the demand for them and the amount moving into export was small. Only in the last three years of the period was there a tendency for the total volume to shrink. The tonnage is of impressive size even when compared with the total of grain shipments.

Flour shipments.—A much larger movement of grain products than is reported as shipped under the transit privilege goes out of the Chicago market by rail and lake in the form of flour and mill feed.[14] In part, this is a duplication of cars reported moving out under transit. The destination of flour and feed shipments is known only in a general way. It is probably not far wrong to estimate that rail shipments of these two classes of products are distributed to the different-rate territories in about the same proportion as shown for grain products above. Shipments of flour are mostly by rail; from 10 to 30 per cent of the total went east by lake, most of it to Buffalo.[15] Flour shipments by rail remained around the high point of 30,000 cars,[16] until after 1926–27, when shipments declined irregularly to a low of 16,372 cars in 1932–33. Lake shipments rose from the equivalent of 3,154 cars in 1924–25 to a maximum of 6,772 cars in 1930–31, declining from that point to 4,748 in 1932–33. As was pointed out earlier (p. 64), flour shipments are in large part a re-export of flour received from other milling centers.

[14] The reason for this is the fact that through-billed and reconsigned cars are reported as "receipts" and "shipments" in the *Board of Trade Report* while transit shipments move out of warehouses or plants in Chicago.

[15] Lake shipments of flour in thousands of barrels are as follows:

Destination	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Buffalo	441	573	760	1,034	1,129	1,089	1,332	1,336	980	736
Erie	173	173	240	235	323	279	257	256	178	140
New York										105
Depot Harbor	25	29	18	34	45	125	93	112	116	119
Ogdensburg	60	3	13							
Fairport	47	51	68							
Collingwood	2									
Windsor			5							
Midland				1						
Totals	748	829	1,098	1,304	1,497	1,493	1,682	1,704	1,274	1,100

(Data from annual reports of the Chicago Board of Trade.)

[16] 1 car = 250 barrels.

Shipments of mill feed.—Shipments of mill feed are not wholly reflected in the transit report for reasons already stated.[17] The tonnage of receipts and shipments is shown in the *Annual Report of the Board of Trade.* Converted to carloads of 36,000 pounds, the annual volume is impressive. At the beginning of the period in 1924, total shipments were equivalent to 30,157 cars. This increased to a maximum of 33,386 cars in 1929, from which point shipments declined rapidly to 19,571 cars in 1933.

Until the last two years when prices were declining most rapidly, shipments of mill feed were almost exclusively by rail; in these years one-sixth of the total went out by lake, presumably to eastern destinations. Of the total rail movement, from one-half to three-quarters went to eastern and southern destinations. The proportion moving to the west by rail increased with the decline in total shipments after 1929.

Receipts of mill feed in Chicago from other points averaged about 9,000 cars annually for the period 1924–33. This ranged from one-fourth to one-half of total shipments. No data are available on local consumption.

SEASONAL VARIATIONS OF GRAIN SHIPMENTS

A measure of the seasonal variation of grain shipped from Chicago has been computed by averaging the monthly shipments of each grain for each type of movement over the nine-year period and then relating each of the monthly averages to the total for the year. The results are shown in Figure 4.

Barley.—Total shipments of barley increase rapidly from the low point of the year in July to a peak in August, when approximately one-fifth of the year's shipments leave Chicago. The volume then declines steadily until December. Beginning in January, shipments increase in volume and reach a secondary peak in April, with the following month showing a recession. August, September, October, and March are the months in which the volume of barley shipments is above the normal for the year.

Shipments by rail for domestic consumption show the narrowest seasonal variations of any type of movement. The high month

[17] See p. 89, n. 14.

is August, during which volume increases rapidly from the low month of the year in July. From August to December a moderate

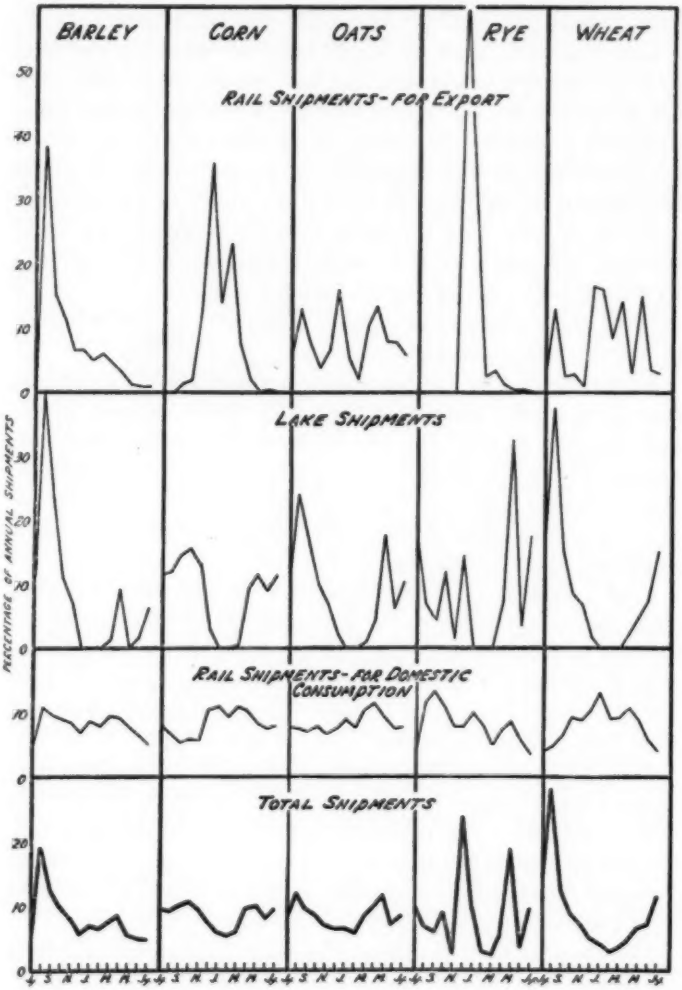

FIG. 4.—Seasonal variations—grain shipments

decline takes place, followed by recovery to a secondary peak in March. The most drastic decline in volume occurs from April to July. Shipments in August, September, October, November, January, March, and April are above the seasonal normal.

Lake shipments show the widest seasonal variations, owing in no small measure to the fact that lake navigation ceases during the winter season. Shipments increase in volume by four times from July to August, the volume in the latter month accounting for two-fifths of the total shipments by lake for the year. The drop from August is continuous to December. There are no shipments of barley by lake from December through February. By April, however, shipments move in large-enough volume to register a secondary peak. No shipments take place in May, and but 1.6 per cent of the year's total in June. Shipments are above normal in August, September, October, and April.

Barley moving by rail for export increases rapidly in volume from July, when 1 per cent of the year's total is shipped, to August, the peak month, when 38.2 per cent of the annual shipments moves. From the August peak shipments decline steadily to June, the latter month ranking with July as the low period for the year. Three months—August, September, and October—show shipments above the normal for the year.

Corn.—Shipments of corn show less seasonal variation than shipments of any other grain. From July to October shipments increase each month until the peak is reached in October; the low point is reached in February. Volume then increases steadily until a secondary peak is reached in May. Shipments are above normal from July through November, in April and in May.

Corn shipments moving by rail for domestic consumption vary between 5.5 per cent of the annual total in September and 11.1 per cent in January. The volume of shipments declines from July through September and then recovers abruptly, reaching a peak in January. Then follows a gradual decline to June. The months from December through May have shipments above normal.

Corn moving by lake reaches a peak in October, followed by a secondary peak in May. Shipments increase slowly from July to October and then fall off steadily, there being no shipments in

January. The volume increases steadily thereafter until the secondary peak is reached in May. Shipments are above normal from July through November and from April through June.

The widest seasonal variation takes place in corn moving by rail for export. The volume of shipments builds up steadily from July until a peak is reached in December, when 35.7 per cent of the annual movement takes place. By January shipments have declined markedly, but they recover sufficiently by February to register a secondary peak. From February shipments decline steadily until by June they have almost disappeared. The period of November through February finds shipments above normal.

Oats.—Monthly shipments vary from 5.5 to 12.2 per cent of the total annual movement. There is a steady falling-off from the peak in August to the low month, February. The volume of shipments then recovers, reaching a secondary peak in May, and then falling off slightly in June. Shipments from July through October, and in April and May, tend to be above normal.

Oats moving by rail for domestic consumption show the least seasonal variation of any of the types of movement, fluctuating from 6.6 per cent of the yearly total in November to 11.6 per cent in April. After decreasing slightly from July through November, shipments build up gradually to the April peak and then recede to a level approximately equal to that in July. A movement above normal takes place in January and from March through May.

Lake shipments of oats show two periods of importance: July through October and in May. There is no movement in January and February. Shipments fluctuate from 0.9 to 23.9 per cent of the annual total. The volume falls off rapidly from the August peak until the close of navigation in December. Beginning in March, the volume builds up to a secondary peak in May. The volume shipped from July through October, and in May, is above normal.

Monthly rail shipments for export vary from 2.1 to 15.9 per cent of the total shipments for the year. The peak occurs in December, with secondary peaks in April and August. February's shipments are the lowest for the year, with a secondary low in October. Marked variations from month to month are common. The vol-

ume shipped increases from July to August, then falls off to the secondary low point in October. By December shipments have reached the high point for the year, but then recede once more to the low in February. A recovery to the secondary April peak follows, only to be offset by a recession to June. Shipments in August, December, March, and April are above normal.

Rye.—Monthly shipments of rye fluctuate from 2.2 to 23.7 per cent of the total shipments for the year. After a decline from July to the secondary low point for the year in November, shipments mount rapidly to a peak in December. By March, shipments have reached the lowest level for the year, but recover rapidly to a secondary peak in May. July, October, December, January, and May are months in which shipments tend to be above normal.

Shipments of rye moving by rail for domestic consumption vary monthly from 3.9 to 13.3 per cent of the total shipments for the year. July is the month of low and September the month of high shipments. Shipments decline generally from their peak in September through the following June, with some minor recovery in January and May. The level of shipments from August through October, in January and in May, tends to be above the normal for the year.

Rye moving by lake shows a wide variation from no volume in January through March to 32.7 per cent of the annual shipments in May. The movement shows a tendency to be relatively high one month and low the next. Shipments in July, October, December, and May tend to be above normal. The bulk of rye moving by rail for export does so in two months, December and January, when 63.2 and 28.2 per cent, respectively, of the annual movement takes place.

Wheat.—Monthly shipments of wheat show the widest seasonal variation of any of the grains studied, fluctuating from 2.8 to 27.9 per cent of the total annual movement. August is the month in which the largest volume of shipments takes place, following which there is a steady decline until the low point is reached in February. The volume of shipments increases steadily from February through July and is above normal from July through October.

Wheat moving by rail for domestic consumption varies each month from 3.9 to 12.9 per cent of the total for the year. Shipments increase steadily from the low point for the year in July until the peak is reached in January. Then shipments fall off steadily, with the exception of a secondary peak in April. The movement from October through May tends to be above normal.

Seasonal variation in shipments by lake corresponds closely to that indicated for total shipments. Month-to-month changes vary from no movement in January and February to 37.4 per cent of the annual movement in August. Shipments are above normal from July through October.

Rail shipments for export vary monthly from 1.0 to 16.5 per cent of the total shipments for the year. The volume tends to reach peaks in August, December, January, March, and May. Although the month of lowest shipments is November, the volume is also very low in July, September, October, April, and June. In addition to the peak months mentioned, February tends to be a month in which shipments are above normal.

For all grains the widest seasonal fluctuation takes place in rail shipments for export; lake shipments are almost as irregular, while rail shipments for domestic consumption show the least seasonal variation.

SEASONAL VARIATION IN MOVEMENT OF GRAIN PRODUCTS

Compared with grain, the seasonal variation in shipments of grain products is very small. When the total movement is considered, there is only a 1 per cent range between the low month, November, when 7.8 per cent of the average annual shipment takes place, and March, the high month, when 8.9 per cent of the annual movement occurs. Within this narrow range there is a fall and spring peak, shipments in August and October being above normal, as are also January, March, and April. The late winter and early spring movement is most sustained.

In the breakdown by destination territories some slight differences appear, though all are alike in showing a fall and spring peak except Illinois and Western. Shipments to Central Freight Association Territory are at a peak in May and reach a low point in

November. Shipments above normal occur in August and October, and again in January and from March through June.

The high point of shipments to Trunk Line Territory comes earlier, in January, when 9.0 per cent of the annual movement takes place, while May is the low month, with 7.6 per cent of the annual total. August and October again show shipments above normal while the heavy winter movement begins in December and stays above normal through April.

To New England Territory shipments are again at a minimum in May, when 7 per cent of the annual total goes forward. March is the peak month, accounting for 10.2 per cent of the annual movement. Only August shows shipments above normal in the autumn, while January through April is again a period of sustained heavy shipment.

Shipments to Southern Territory show a type of seasonal movement closely resembling that to Central Freight Association Territory, August and October being months of characteristically heavy shipment, with a movement above normal again from January through May. Shipments into Illinois-Western Territory have the greatest seasonal range and depart most widely from the seasonal pattern of shipments to eastern destinations. July is the low month, with 6.6 per cent of the annual total. Volume increases rather uniformly until April, the peak month, when 11.8 per cent of annual shipments leaves the market.

THE FEDERAL COURTS AND ORGANIZED LABOR—*Continued*

III. SINCE THE CLAYTON ACT

JAY FINLEY CHRIST[303]

INJUNCTIONS UPON PRIVATE PETITIONS UPON MATTERS OF INTERNAL ORGANIZATION[304]

IN SEVEN reported federal cases, since the adoption of the Clayton Act,[305] individuals have petitioned for injunctive relief upon issues which have arisen from problems of the internal organization and administration of labor unions. It seems advisable to begin with a rather recent reported case, since in that case is applied the rule upon which jurisdiction in such cases is founded.[306] In *Fish* v. *Huddell et al.*[307] complainant was a business agent of a union. The president of the union, under power granted by the union, suspended the complainant from his employment, and complainant brought a bill to restrain the enforcement of the suspension order. Upon the trial, it appeared that complainant had not carried an appeal to the general board of the union, as he might have done under the rules of the union, though he did show that the president of the union controlled the board of appeals. Relief was denied, on the ground of alleged basic rule, to the effect that no relief will be afforded with respect to the internal affairs of any voluntary association without a showing that available remedies within the organization have been exhausted. Complainant's failure to appeal to the board is regarded as a failure to

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[304] As to the relation of this article to the general series, see this *Journal*, VII (January, 1934), 60, n. 261.

[305] None of the seven cases involved issues under the Act.

[306] Granted, of course, *federal* jurisdiction, generally, in each case, on grounds of diversity or otherwise.

[307] (1931) 51 F. (2d) 319, Case No. 223, Appendix, this *Journal*, VI (April, 1933), 170.

exhaust his remedies within the organization.[308] In an earlier case in the same year,[309] there was a bill to enjoin the carrying-out of a decree which had been rendered by the general board of the Brotherhood of Railroad Trainmen, in a dispute between local lodges as to seniority rights on a certain freight run. Relief was denied on the ground that the courts will not interfere with such orders, in the absence of fraud.

In *Bricklayers', etc., Union et al.* v. *Bowen, et al.*[310] it appeared that a suspension of complainant from membership had been ordered as a result of proceedings not in accordance with the constitution and rules of the international organization; and an injunction was issued restraining the operation of the suspension order, on the ground that it was wholly void as not in accord with the rules.[311]

Burke v. *B. of L. E., et al.*[312] is interesting chiefly because of its sequel. During the 1917 strike against the Pennsylvania Railroad, Burke, a member of the B. of L. E., *was induced by the employing company* to start a suit to enjoin the strike, which Burke claimed to believe was not authorized. The suit never came to trial, but Burke was expelled from the union, being thus deprived of his death-benefit rights and other perquisites.

> The charge upon which he was expelled was that . . . . he had filed a bill in the United States District Court . . . . seeking to restrain [the members of the Brotherhood] from taking part in a strike. It was alleged that such action

[308] A short note in 7 *Sou. Cal. Law Rev.* (March, 1934), 338, points out that this rule is generally followed in the decisions of the state courts. Practically all of the state decisions are cited in the note, which also points out certain exceptions to the rule: (*a*) where there is suspension without hearing or trial; (*b*) where procedures are not followed in good faith; (*c*) where purely legal questions are involved; (*d*) when it would be vain or illusory to follow internal procedures. It is also pointed out that this rule does not apply to suits for damages for expulsion. The latter statement is borne out by some of the federal cases discussed *infra*.

Complainant in the Huddell Case apparently proceeded upon some such ground as exception (*d*).

[309] *McMurray et al.* v. *B. of R. T. et al.* (1931), 50 F. (2d), 978, Case No. 221, Appendix.

[310] (1922) 278 Fed. 271, Case No. 137.

[311] Cf. exception (*b*), note 308, *supra*.

[312] (1919) 273 Fed. 707, Case No. 118.

was in violation of Section 35 of the Standing Rules of the Brotherhood, and was conduct unbecoming a member, and was contrary to his obligations.[313]

Burke's bill to compel reinstatement was allowed, on the ground that the association had no legal authority to expel a member for using the courts *in good faith*[314] to test the legality of the acts of the officers of the association. Burke was reinstated; but in a second case, with the same name and tried before the same judge and in the same court,[315] it appeared that the union had suspended Burke a second time. The second charge was that he

had betrayed the interests of the Brotherhood by aiding the railroad and negotiating with it at a time when the Brotherhood and the railroad were having a labor dispute, and *at the request of the latter*, permitted a suit to be filed in his name . . . . seeking to restrain the members of the Brotherhood from calling a strike, and that his conduct at that time was a violation of the obligation assumed by him upon entering the Brotherhood, and of the duty and obligation owing by him as a member of the Brotherhood.[316]

The court in the second case held that, since Burke brought the suit at the instance of his employer, he was violating the rules of the order, and that the union was within its rights in expelling him for his act of disloyalty. The court appears to base the second decision upon a belief that Burke did not act in good faith in the first injunction proceeding to restrain the strike. He brought the suit, says the court, "at the procurement and at the expense of the Pennsylvania Railroad Company, and did not disclose that fact upon the face of his complaint."[317]

[313] From the language of the court, 273 Fed., at p. 711.

[314] Italics are supplied.

[315] (1922) 286 Fed. 949, Case No. 1180.

[316] 286 Fed., at p. 950.

[317] 286 Fed., at p. 955. This looks like a mere overruling of the earlier decision. In the earlier opinion, it was made perfectly clear, *in the language of the court* as it stated the facts, that the bill to restrain the strike was brought at the procurement (if it did not appear to be at the expense) of the railroad company.

Further than that, the present writer is not aware of any general principle of law which forbids the making or the enforcement of an agreement not to use the courts, even in good faith. Certainly there are some cases in which such agreements are regarded as contrary to public policy, such as some of the arbitration and award cases; but just as certainly, there are many instances in which promises not to sue have been regarded by the courts as valid and enforceable.

And finally, the *reason* for the expulsion was the same in each instance. The dif-

Three other cases, all between the same parties and all under the same title, complete the group of internal organization cases. In the first case,[318] it appeared that the international union's constitution provided that whenever, under certain conditions, as many as one hundred and fifty local unions should petition for a given amendment to the constitution, such amendment must be submitted for a vote by the council to the membership within three months of the date of the petition. A certain amendment proposed to take away all election rights from some three thousand mailers (who belonged to locals affiliated with the international union), and leave all such rights to the seventy thousand printers who belonged to the international. The petition for this amendment had been indorsed, under the proper conditions, by one hundred and fifty local unions; but all members of the council, except the president of the international, were opposed to the amendment and refused to join in submitting it to a vote. The president thereupon proposed to submit the amendment, and the case arose upon a bill to restrain submission. The petition was granted and an injunction issued, on the ground that, in accordance with the rules of the association, submission, if made at all, must be made by the council.

In the second case,[319] it appeared that the international had properly adopted an amendment to the constitution. The amendment provided for a substantial reduction of the voting privileges of the mailers in the international, and for taking from them their pension privileges and their privileges of residence in certain printers' homes, upon retirement. In an unreported case, an interlocutory decree was granted, restraining the enforcement of this amendment, on the ground that the amendment would operate as a violation of established rights (apparently, they were con-

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ference is said to lie in the fact that the court has discovered that Burke did not act in good faith. In fact, however, the court, in the earlier opinion, said, "Had he [Burke] been left to his own devices, it is not likely that he would have done more than grumble." 273 Fed., at p. 710. Then, a half-page of statement of facts casts, in nearly every line, suspicion upon his good faith. Certainly, the statement shows that the employer asked him to act.

[318] *Howard* v. *Weissman et al.* (1927), 21 F. (2d) 497, Case No. 210. The case was consolidated with *McNichols et al.* v. *Intl. Typo. Union et al.*

[319] *Howard* v. *Weissman et al.* (1929), 31 F. (2d), 689, Case No. 210a.

tractual rights). When the interlocutory decree was issued, the international advised the mailers that, unless the latter should pay the costs of the then recent litigation, they would be declared delinquent and that they would then be suspended for delinquency. In the hearing to make the decree permanent, the mailers sought to enjoin the enforcement of the latter order. The international then proposed to fall back upon a constitutional provision of 1926, which cut off some of the mailers' voting rights but which had never been in litigation. The decree was made permanent, and it also restrained enforcement of the delinquency order. Enforcement of both of the orders of the international was enjoined, because enforcement would operate as deprivation of "vested" interests.

The only report of this case is the one cited here, in which all the decrees of the trial court were affirmed. (*a*) Enforcement of the current amendment was restrained, and (*b*) enforcement of the 1926 amendment was restrained. Both amendments were regarded as unlawful attempts to deprive the mailers of their vested [contract?] rights as members of the international. (*c*) Enforcement of the order with respect to the demand for payment of costs and attorneys' fees was also restrained, because the order was calculated to embarrass the mailers in a suit then pending to determine their rights.

In the third case,[320] it appeared that, after the results of the earlier proceedings, the international had recourse to certain provisions of the constitution which had been in effect since 1902. Under these provisions, the international refused to issue charters to any newly organized local unions of mailers, it took into the international a number of mailers without requiring them to pay dues, it took into the international some mailers who had been suspended from the mailers' locals, and it issued membership ("traveling") cards to many mailers who did not belong to the international. By these methods, the international sought to break down the mailers' organization, and to absorb the individual mailers into the international.

The bill in this case was brought by the mailers, to restrain these

[320] *Howard* v. *Weissman et al.* (1933), 63 F. (2d), 490. The case had not been reported when the table of cases was compiled for use in this series.

practices. Relief was denied, however, on the grounds (*a*) that there is no right to compel the issuance of charters under the constitutional provisions of 1902; (*b*) that it is lawful for any mailer to withdraw from the mailers' organization, if he chooses to do so, thereby surrendering his interests in the funds of the mailers' organization, and it is not unlawful for the international to induce the individual to leave the mailers, by remitting his dues in the international.[321]

These cases are merely illustrative of the application of the rule (and some of its exceptions) which was discussed above.[322] There is no remedy against internal procedures, unless procedures are not carried out in good faith in accordance with the rules of the association, or unless questions of law (legality of action or procedures) are involved, or unless internal remedies have either been exhausted or would obviously be fruitless.[323] Even in one of the latter cases (where remedies are exhausted or fruitless), no remedy lies unless we are able to find something unlawful in the internal procedures.

THE CONTEMPT CASES

Among other aspects of the Clayton Act which have in some degree affected the legal position of organized labor under federal

[321] The practice with respect to "traveling" cards had been stopped, and was not in issue; but it does not seem to stand upon different ground from the remission of dues. The cards are only evidence of membership in good standing.

[322] *Supra*, pp. 97 ff.

[323] Another case which involved internal control of a union arose upon a bill for specific performance. In *Moyer et al.* v. *Butte Miners' Union* (1916), 232 Fed. 788, it appeared that the local union was incorporated in 1881, and in 1893 this local took a charter from the state federation (complainant's principal). Complainant claimed that there was in this charter a provision for the forfeiture of the local's property under certain conditions. This charter was lost, and in a new one issued in 1914, the forfeiture clause appeared. The conditions of forfeiture had occurred; but defendants (the local) refused to convey the property, and there was a bill for specific performance. Relief was denied. The court was uncertain whether or not the forefeiture provision was in the 1893 charter; but it made the statement that even if it had been there, such a provision would have been unenforceable, since under the charter of incorporation of 1881, the local had no power to surrender its powers or its property to the complainant's principal (the state federation).

This case, of course, deals fundamentally with corporation law, and only accidentally with a labor organization.

law, there are the now famous provisions for jury trial upon certain issues of contempt, in the federal courts. Excepting issues which arose under these provisions, the period following the adoption of the Clayton Act added little that was new to the law of contempt of court, as to definition of the contempt concept, or as to methods of determining what parties are subject to decrees of one or another sort. But in the interest of including somewhere in this series some notice of every federal case which has involved issues of primary interest to organized labor, and before turning attention to the jury trial provisions of the Clayton Act, it seems desirable at least to summarize the results of the contempt cases in this period, in so far as they deal with such problems as: What is contempt? What parties may be guilty of contempt? What courts have jurisdiction of specific contemptuous conduct?

What is contempt of court?—This question is discussed directly or indirectly in a number of cases in this period. In *U.S.* v. *Taliaferro*[324] an injunction had ordered strikers and "all other persons conspiring or associated with them" from interfering with or insulting employees about certain premises or on their way to or from work there. Taliaferro was a barber whose shop was beside a road to the plant. After the issuance of the injunction, he displayed in his shop window a placard which had been furnished by the strikers and which read, "No Scabs wanted in here." This was held to be an act of contempt, in violation of the injunction.[325] In *Binkley* v. *U.S.*[326] and in *McGibbony* v. *Lancaster*[327] it was held that, when a decree has been issued in one district, violation of it in another is contempt of the issuing court.[328] In *Cohen* v. *U.S.*[329] an injunction had been issued restraining all persons with notice from coercing persons willing to work, "jeering at or insulting employees of plaintiffs or molesting them," and from in any way hindering, obstructing, or impeding the performance by plain-

[324] (1922) 290 Fed. 214, Case No. 158.

[325] Affirmed in (1923) 290 Fed. 906 (C.C.A.), No. 158a.

[326] (1922) 282 Fed. 244, Case No. 152.

[327] (1923) 286 Fed. 129, Case No. 163.

[328] The jurisdictional aspect of the Binkley Case is rather important. It is discussed in another connection, *infra*.

[329] (1924) 295 Fed. 633, Case No. 178.

tiffs of their business in the usual or normal way. Defendant had knowledge of this decree; but in the labor paper which he owned, he published a vilifying article about scabs, in which he clearly referred to strike-breakers in plaintiff's plant in the instant strike. Defendant was found guilty of the alleged contempt, but the Circuit Court of Appeals reversed the judgment, saying that such publications as that of the defendant were not contempt, because the decree referred to personal action *only*. In *Minerich* v. *U.S.*[330] defendant was held guilty of contempt in the making of a speech, but the speech advised and even urged disregard and disobedience of an injunction. The latter judgment was affirmed in spite of the fact that the injunction itself was somewhat broader than was justified by the rule laid down in the American Steel Foundries case.[331] This, of course, is merely an application of a general principle of the law of contempt, namely, that violation of any decree is contempt, even though the decree itself may not have been legally justified.[332]

[330] (1928) 29 F. (2d) 965, Case No. 214. It was the same court in this case as that which reversed the conviction in the Cohen case, *supra*.

[331] Cf. this *Journal*, IV (April, 1931), 208–10, on this aspect of contempt.

[332] Three other cases, apart from the Clayton Act, are of passing interest, because of their definitions of the distinctions between civil contempt and criminal contempt. (Cf. this *Journal*, IV (July, 1931), 272, n. 233.) The first case is more or less orthodox. In *U.S.* v. *Bittner* (1926), 11 F. (2d) 94, Case No. 198, the court takes the ground that civil contempt is in issue when the contempt proceeding is between the original private parties to the injunction suit, so that the contempt proceeding is in reality a part of the original cause; while criminal contempt is in issue when the contempt proceeding is between the government and the contemnor and the proceeding is not a part of the original cause. The distinction was important in the particular case, because the government had appealed from an acquittal, and it was held that no appeal could be taken from an acquittal in a proceeding for criminal contempt, which this proceeding was.

In *Reeder* v. *Morton-Gregson Co.* (1924), 296 Fed. 785, Case No. 181, it is said that civil contempt is a *refusal* to do an act commanded—disobedience of a mandatory decree—so that the remedy is *coercive;* and that criminal contempt is the *doing* of an act forbidden by a decree—disobedience of a prohibitory decree—so that the remedy is *punitive* in character. This distinction is an interesting one; and it seems to be supported by *Gompers* v. *Bucks Stove and R. Co.* (221 U.S. 418; 31 S.C. 492, 498); but it is not believed that there is much merit in it. Cf. this *Journal*, *loc. cit.*, n. 331, *supra*.

In *Forrest et al.* v. *U.S.* (1922), 277 Fed. 873, Case No. 136, it is said that criminal contempt is distinguished by the fact that the proceeding is brought by the government.

Who may be guilty of contempt?—In 1907, during a strike against the West Kentucky Coal Company, an injunction had been issued restraining the doing of certain acts. In 1917, during another and unrelated strike against the same company, defendants in *Tosh et al.* v. *West Kentucky Coal Co.*[333] had been served with certified copies of the 1907 injunction, and they had committed certain acts which were enjoined in that decree. In a proceeding for contempt, it was held that a decree is not applicable to parties who, ten years after the decree, take part in an unrelated strike, even though they acted with knowledge of the earlier decree. In *Day* v. *U.S.*[334] defendant was found guilty of contempt, though he was not a party to the original suit. His contempt consisted of acting in concert with parties to the original suit, and with knowledge of the decree. In *Winkle et al.* v. *U.S.*[335] defendant appealed from a conviction for contempt. His appeal was based upon the allegation that he was not an employee at the time of the doing of the contemptuous acts; but it was the judgment of the court that this was immaterial, so long as he was a party subject to the order.[336] One may be guilty of contempt, then, without being a party to the original suit, and without being an employee of a party to the suit, provided he is a party who is subject to the decree and provided he acts with notice of the decree.[337]

Jurisdiction in contempt cases.—In the discussion of the issues involved here, as of the period from 1890 to 1914, no labor cases were available as authority for the statement that one court is not authorized to try or punish contempt of another court.[338] In the later period, several reported labor cases throw some interesting light on this question. In *Binkley* v. *U.S.*[339] a decree had been is-

[333] (1918) 252 Fed. 44, Case No. 122.

[334] (1927) 19 F. (2d) 21, Case No. 208.

[335] (1923) 291 Fed. 493, Case No. 174.

[336] The same effect is seen in the Taliaferro Case, where defendant was not a party to the original suit, or an employee, but was a party subject to the order, because he acted "in concert with" parties to the suit. But compare *Armstrong et. al.* v. *U.S. infra*, n. 348.

[337] Cf. this *Journal*, IV (April, 1931), 203, 210.

[338] This *Journal*, IV (April, 1931), 200 ff.

[339] (1922) 282 Fed. 244, Case No. 152.

sued in a receivership case; the decree had been violated in a federal district other than that in which the decree was issued; and when the question of jurisdiction was raised in a contempt proceeding in the court which had issued the decree, it was held that jurisdiction to try contempt is in the court whose decree has been violated, even though the violation has taken place outside the *territorial* jurisdiction of that court.[340] In *Myers et al.* v. *U.S.*[341] the contempt was committed in the territory of another *division* of the same district as the issuing court, and the Supreme Court upheld a decision to the effect that jurisdiction of contempt was in the *division* which issued the decree. Finally, in *Steers* v. *U.S.*[342] it was said that contempt *must* be tried in the territorial division which issued the decree, *unless defendant consents to be tried elsewhere.* As to the italicized clause, no reported case has been found precisely in point.[343] One infers from the whole group of cases that though defendant may *consent* to be tried outside the issuing jurisdiction, he may not *demand* to be so tried.[344]

[340] This is supported by *Dunham* v. *U.S.* (1923), 289 Fed. 376, Case No. 170, and *Sullivan* v. *U.S.* (1925), 4 F. (2d) 100, Case No. 188.

[341] (1924) 264 U.S. 95; 44 S.C. 272, Case No. 179. A similar situation existed in *McCourtney* v. *U.S.* (1923), 291 Fed. 497, Case No. 174*a*, and it was dealt with in the same way.

[342] (1924) 297 Fed. 116, Case No. 180.

[343] In the Steers Case, however, authority is cited for the proposition that "the statutory divisions of districts are to be treated, *for territorial jurisdictional purposes*, as separate districts, See *The L.B.X.*, 88 Fed. 293, and *Petri* v. *Creelman Lbr. Co.*, 199 U.S. 487; 26 Sup. Ct., 133.

[344] This coincides with what was discovered in this connection in the earlier period, see note 338, *supra*.

[*To be continued*]

BOOK REVIEWS

Codes, Cartels, National Planning. By BRUNO BURN. New York: McGraw-Hill Book Co., Inc., 1934. Pp. x+413. $4.00.

Self-administration of business under government guidance and cooperation, as a foundation for national planning, is *The Road to Economic Stability* (subtitle of the book), according to this author, and the device for self-administration is the cartel. The author bases his suggestions and conclusions upon an experience of nearly twenty years in official positions in German cartels. Since May, 1933, he has been an economic consultant in the United States.

The book deals briefly with American economic history, the antitrust policy of the government, the functions of government, the recovery program, and the industrial codes, and somewhat more at length with European cartels. The author attempts to show that free competition has ceased to be an important factor in American life, that the policy of laissez faire has been a mistake and a failure, and that results of the antitrust laws and their enforcement have been harmful. His analysis of the functions of government leads him to reject also government ownership and economic dictatorship and to conclude that the state should guide and supervise business. The recovery program accordingly meets with the author's hearty approval, but he finds it to be valuable only as a beginning in the permanent reorientation of business. The codes, some of which are briefly described, are characterized as rather primitive, in comparison with the cartel agreements of Europe, though quite satisfactory for temporary use. Three chapters are devoted to the description of the several types of European cartels and to details of their organization and management, and the Appendix gives eleven forms for cartel agreements adapted to American needs.

After contrasting Socialism, Fascism, and the New Deal, of which his own plan is intended to be a part and all of which are entitled "economic solidarism," the author proposes the following economic organization. First, there would be great associations to include kindred codified industries, such as the several textile industries. These associations would be joined in nine code federations, one each for industry,

wholesalers, retailers, transportation, banking, insurance, communication, agriculture, and artisans. Above these federations would be a national council

> which would be entrusted with the task of formulating the general scope of policies to be followed by business during a given period. . . . . The council could also perform equally valuable services in the formulation of the economic policies of the government. Problems of population growth, public works, foreign trade policies . . . . could best be solved through a co-operative effort of business . . . . and the government.

The book is interesting as an attack upon economic problems by a practical business man, but it is not primarily a scientific study. It offers little information aside from the description of cartels and cartel agreements and largely ignores basic economic and political fact. Comprehensive as is the author's economic plan, there is no analysis of American economic problems. Transportation and banking are cartelized without reference to any European experience or to established control in America in these fields. The special problems of agriculture and the special treatment of agricultural problems under the New Deal are ignored.

Likewise in the particular in which the book might be expected to be most helpful, the economic aspects of cartelization in Europe, almost no data are offered. Two charts show the relative stability of cartel-controlled and free prices, but with no indication of the economic consequences of price control to the industries involved, to other industries, or to the public. One chart shows the parallel decline of employment and free prices in Germany previous to 1931, but without indicating whether or not the unemployment was in non-cartelized industries alone. At page 169 the statement appears that "German statistics bear out the contention that real wages have consistently increased in cartelized industries, while in many unregulated industries the real purchasing power of wages has not risen in the same proportion." No analysis, data, or citations accompany such statements.

The very advocacy of the cartels, furthermore, is so interspersed with admissions as to their activities as to put them definitely on the defensive. Thus:

> There are undoubtedly instances where some cartels have seized opportunities to fix prices at an unduly high level. A few cartels have, indeed, temporarily exploited monopolistic market positions. . . . . A well-managed cartel, however, will not permit itself to be governed by such near-sighted considerations.

Again:

> It was only when the German government organized the potash cartel into a compulsory cartel and imposed restrictions on the opening of new potash mines that the vicious spiral was stopped. . . . . A well-managed cartel will, however, avoid such pitfalls.

These quotations suggest that the author offers us only a hypotheti cal "well-managed cartel" to deal with hypothetical American problems and conditions.

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Economics of Clothing and Textiles. By WILLIAM H. DOOLEY. Boston: D. C. Heath & Co., 1934. Pp. 683. $3.00.

The purpose of this book, as stated in the Preface, is "to give students, workers, and leaders of a great and important industry a working knowledge of the economic principles underlying the clothing business." In addition, "since everyone is a consumer of clothing and textiles," the author hopes that "the book may be used . . . . as a valuable part of a liberal education in the social sciences." One could indeed wish that the purpose had been accomplished, for there is need for just such a work. But it is doubtful that the present volume will fill this need, it being evident that the author is more at home with the technology of the clothing and textile business than with economic theory; both fields of knowledge are, however, necessary for an adequate treatment of the subject.

The most valuable contribution which the book has to make is in bringing together a wide range of material relating to the textile and clothing industries. Just a glance at the topics listed in the Table of Contents gives one an idea of the size of the task which the author set himself. It is obvious that he has read widely, and with attention to details, concerning the psychological and sociological bases of clothing, business organization, international trade, money and credit, the business cycle, and the distribution of the social income—to name a few of the sixteen titles of chapters.

In a careful reading of the text, one encounters many statements that seem at least open to question, but there is no opportunity to check their interpretation since no bibliography is given and in only a very limited number of instances is the source of data given. It is to

be regretted that no supplementary references are suggested, because if the book is to be used as a text, extended reading would be necessary for an adequate understanding of the wide range of topics which could of necessity be treated only briefly in one book.

In spite of certain weaknesses, the book is, however, a valuable contribution to the field in that it brings together much interesting material and points the way toward a new organization of the subject of textiles and clothing.

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